United States Court of Appeals
FOR THE SECOND CIRCUIT

No. 28026

TRANS WORLD AIRLINES, INC.,
Plaintiff-Appellee,
against
HOWARD R. HUGHES and RAYMOND M. HOLLIDAY,
Defendants,
and
HUGHES TOOL COMPANY,
Defendant-Appellant,
and
THE EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES, METROPOLITAN LIFE INSURANCE COMPANY, IRVING TRUST COMPANY, DILLON, READ & CO. INC., BEN-FLEMING SHERRILL, JAMES F. OATES, JR., HARRY C. HAGERTY and CHARLES C. TILLINGHAST, JR.,
Additional Defendants-Appellees,
and
ERNEST R. BREECH,
Additional Defendant.

APPENDIX OF PLAINTIFF-APPELLEE TRANS WORLD AIRLINES, INC.

CAHILL, GORDON, REINDEL & OHL,
Attorneys for Plaintiff-Appellee,
Trans World Airlines, Inc.,
Office and P. O. Address:
80 Pine Street,
New York 5, New York.

Dated: September 30, 1963.

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Exhibits A 30, 32, 34, 40 and 43 are omitted since they are identical to other materials printed in this Appendix.

EXHIBIT A 1

CREDIT MEMORANDUM

[R-2934A]

Los Angeles Main Office #600
June 4, 1957

HOWARD R. HUGHES
TRANS WORLD AIRLINES

On June 4, 1957 I talked over the telephone with Ben-Fleming Sessel, Senior Vice President of Irving Trust Company, New York. I told Sessel that we had received from one of his associates a letter relating to the TWA matter, copy of which had been sent to Noah Dietrich and we wondered what the situation was in that respect. He said that there had not yet been any official announcement regarding Dietrich and accordingly his bank was simply following instructions contained in the loan agreements.

An official of the National Bank of Commerce of Houston had become aware of a change in signature cards, leaving Dietrich out and had talked with Sessel in an effort to determine what was going on.

Sessel said that Dietrich was in New York and would have dinner with him on the 5th. Sessel felt that the conversation was to relate to personal rather than official matters. Howard Hughes has told Sessel not to do anything about Dietrich for the time being. Dietrich is still on the TWA board but according to Hughes, "not for long."

Sessel has passed along to Hughes all of the things that he, Sessel, and we have agreed upon concerning the future handling of the account as to which Hughes has requested

that the matter be left to him. (Sessel comments, "Whatever that means".)

Sessel said that the TWA offering would go through and that while he would much prefer having a definitive firm take-out or firm guarantee by Hughes Tool on our $10 million six months loan to TWA, he feels that the over-all situation is such that Hughes "will have to feel an obligation" to see that the $10 million is paid.

Sessel says that Hughes has in mind buying some Viscounts to the tune of $15 million for the planes plus about $7 million for spare engines and parts. The purchase might be by Hughes Tool Company or might be by TWA with the Hughes Tool Company guaranteeing. If the purchase were made it would be made under the British Government arrangement whereby a purchaser pays 20% down and credit is given for the remaining 80% if properly supported, and in this case, the support could be the Hughes Tool Company guarantee. Hughes asked Sessel whether the banks would be interested and Sessel's reply was that Hughes should get TWA's present deal out of the way first and the banks would not be interested in talking about anything until it is settled.

Sessel raised the point with which we agreed that $22 million probably would not buy enough planes of a type completely new to TWA to justify the setting up of servicing facilities. Hughes apparently wants to replace TWA's Martins which are said to be substantially worn out.

Exhibit A 1

[R-2935]

HOWARD R. HUGHES
TRANS WORLD AIRLINES

June 4, 1957
Page 2.

We discussed the so-called "special loan" to Howard Hughes which revolved around Hughes' contract with RKO Teleradio. It will be recalled that we had told the Irving Trust Company that we would be happy to participate in the loan provided Howard Hughes was entirely agreeable to it. Sessel told me today that we had not been given a piece of the loan *because Hughes did not want us in on it.* It will be recalled that a part of this deal contemplated Hughes delivering prints of the film "Jet Pilot" to Teleradio by June 1. Sessel said that on Friday, May 31, someone with RKO-Pictures, he didn't know exactly who, telephoned to Technicolor and told them not to release prints of "Jet Pilot". It will be remembered that Hughes had given his word that this picture would be delivered and that RKO Teleradio had said that unless the picture were delivered they wouldn't make payments on the contract. Sessel concluded that there is a "clear breach of faith" somewhere.

I asked him whether this conduct of Hughes might bear out Dietrich's statement that "Hughes is a bad boy" to which Sessel replied that he thought not.

s/ ROBERT L. GORDON
Vice President

cc: Keath L. Carver
T. C. Deane
R. G. Hawley

EXHIBIT A 2

[R-2936]

March 11, 1958

MR. RADU IRIMESCU
FLOYD B. ODLUM

Gardner, Austin and Lane were here over the weekend and we discussed proposals A, B and C. I agreed to go along with proposal B, if approved by the Directors, including yourself, and Stretch.

However, I pointed out that Hughes had repeatedly said he would make some concession to help us if we could pick up all or a substantial part of the Viscount planes and asked whether the Viscounts, at least for service from Washington north, might not be a better deal, if obtainable on lease, than proposal B with the Convairs. Gardner, Austin and Lane made calculations and came up with the belief that figurewise the Viscounts would give us a much better showing and of course from the standpoint of putting us over as a first rate company would be much better than the Convairs.

Since then I have talked to Howard Hughes and he indicated that he very likely could find a buyer of the planes who would rent them to Northeast. Convair indicated to Gardner and Austin that they also could probably find a buyer for these Viscounts who would lease them to Northeast, conditioned of course in this case on our ordering 880's. I asked Convair this morning to forget a followup of this for a few days because Hughes is working on it and asked that for a few days we not discuss it with anybody, including the British and I would not want to have wires crossed just at this time.

F. B. O.

cc: MR. GARDNER

EXHIBIT A 3

[R-2937]

Show to Stretch. Northeast

NEA—Viscounts
Irimescu—transmitted by phone

3/17/58

Hughes told me today he progessing well with Viscount lease matter and expects to reach point by end this week where he can put principal who is to buy planes in direct touch with Northeast for preparation of lease.

FLOYD ODLUM

EXHIBIT A 4

[R-2938]

THE BARCLAY
111 East 48th Street
New York

March 18, 1958

Dear Floyd:

Jim, Rem and I have just come from a talk with Radu during which we talked to you about training costs on Viscounts. This was part of a general discussion about what course to follow.

After leaving Indio we called at San Diego, Lockheed and went up to Boeing. The primary purpose of our trip to Boeing was to check up on figures we had been given and give Austin a chance to see the airplane.

On the way home we put together various possible combinations and the enclosed projections are the result.

Yesterday Bristol called to say the Brittania would be certificated April 7th. That is reason for the Bristol projections. I can only say that all three of us were very impressed by Boeing's progress, their airplane and figures based on real experience. Much as it may hurt I'm sure these airplanes are going to win almost immediate acceptance. If I had my choice of all deals it would be early delivery of 3 707-150's even if we don't increase our fleet at all between now and July, 1959. I think Jim still thinks we should do a Convair 240 lease deal in the interim.

We are waiting anxiously for word from Mr. Hughes reference the Viscounts. Since financing the Boeing looks impractical at moment the Viscount is second choice.

Many thanks again for your hospitality when we were in Indio.

Sincerely,

GEORGE GARDNER

T-7

EXHIBIT A 5

[R-2940]

7-28-59

Carver 7-28-59 I called at his request 8:01 Pan Am deal closed. Has money—Boeing said to have consented.

H.H. Hasn't paid Boeing

H.H. Doesn't intend to pay Boeing—feels Boeing has held him up.

H.H. feels he has done a better job moneywise than if he had done the aircraft deal.

Convair has agreed voluntarily to reduce order from 30 to 20 & return deposits provided he will discontinue negotiations with Capital Air Lines on 6 planes.

Hughes says Sessel is his representative & has severed his connection with Irving—(all news to us.)

B of A.—Gordon

EXHIBIT A 6

July, 1959

[R-2941]

NORTHEAST AIRLINES, INC.
Logan International Airport
Boston 28, Mass.

Re: Purchase by Northeast of three (3) Convair Model 880 jet aircraft.

Gentlemen:

This letter will evidence the recent discussions between Hughes Tool Company ("Hughes") and Northeast Airlines, Inc. ("Northeast") undertaken with a view toward the acquisition by Northeast, either directly from Hughes or from General Dynamics Corporation (Convair Division) ("Convair"), of three (3) of the Model 880 Convair aircraft now covered by the Purchase Agreement between Hughes and Convair dated September 10, 1956, as amended.

Hughes does hereby indicate its willingness to transfer to Northeast, either in the form of an assignment to Northeast of Hughes' contractual rights with Convair under the aforementioned purchase agreement insofar as same pertain to the three Model 880 aircraft hereinafter identified, or in the form of a sale of the aircraft upon or subsequent to the delivery thereof by Convair to Hughes. Northeast, by its acceptance of this letter of intent, shall thereby evidence its willingness to acquire said three (3) Model 880 aircraft. The respective obligations of Hughes and Northeast to sell and purchase said aircraft shall, however, be subject to the parties' agreement to a form of (R-2942) definitive contract, which contract the parties shall endeavor to negotiate and exe-

cute within thirty (30) days next following Northeast's acceptance of this letter of intent, and which contract shall contain, among other necessary provisions, substantially the following terms:

1. *Identification of Aircraft.* The three (3) Model 880 Convair aircraft (hereinafter referred to as "The Aircraft") shall be those now designated by Convair as the 23rd, 26th, and 30th such aircraft covered by the Purchase Agreement between Hughes and Convair dated September 10, 1956 (hereafter referred to as the "Convair Contract"), and which are required by the provisions of the Convair Contract to be delivered to Hughes during the months of August and September, 1960.

2. *Configuration.* The Aircraft shall conform in every respect to the Specifications which prescribe the configuration and physical characteristics of such of the aircraft covered by the Convair Contract as, prior to delivery to Northeast of The Aircraft, shall have been delivered to Trans World Airlines, Inc. ("TWA") by Hughes or by Convair; provided, however, that in the event of any changes to the Specifications made by Hughes or TWA, pursuant to agreement with Convair, subsequent to the date on which Northeast's obligation to purchase The Aircraft becomes firm and unconditional, such changes shall not, without the consent of Northeast, be embodied in The Aircraft unless and except to the extent that Convair shall so require.

[R-2943] 3. *Price.* The price of The Aircraft shall depend upon the form in which The Aircraft or the rights thereto are transferred from Hughes to Northeast, as follows:

(a) If the Hughes-Northeast transfer shall be effected by the assignment of Hughes' contractual

rights relative to The Aircraft, the consideration for such transfer shall be the sum of the following:

(i) Northeast's assumption of all obligations and liabilities of Hughes in favor of Convair applicable or properly allocable to The Aircraft,

(ii) the payment by Northeast to Hughes of the sum of $2,626,650 (representing the installment payments heretofore made by Hughes to Convair with respect to The Aircraft),

(iii) interest on said sum of $2,626,650 at the rate of 5% per annum from the date of Hughes payment of the aforesaid mentioned sum to Convair (such amount of interest being hereinafter referred to as "Capitalized Interest"),

[R-2944] (iv) such portion of Hughes reasonable expenses incurred in administering the Convair Contract as is directly attributable or properly allocable to The Aircraft (hereinafter referred to as "Hughes' Administrative Expenses"),

(v) in the event by reason of the application of the de-escalation clause of the Convair Contract the price per airplane to Northeast is less than $3,733,000, an amount equal to three times that by which $3,733,000 exceeds the price per airplane to Northeast.

(b) If the Hughes-Northeast transfer is effected by a sale from Hughes to Northeast of The Aircraft upon or subsequent to delivery thereof from Convair to Hughes, the consideration for such transfer shall be the payment by Northeast to Hughes of the sum of the following:

Exhibit A 6

(i) An amount equal to the total purchase price paid by Hughes to Convair for The Aircraft, but in no event less than $3,733,000 per airplane;

(ii) the Capitalized Interest; and

(iii) Hughes Administrative Expenses.

[R-2945] 4. *Payment.* In the event that all other amounts (e.g. Capitalized Interest and Hughes' Administrative Expenses) owing by Northeast to Hughes are paid in cash at the time of the execution of the assignment by Hughes to Northeast of the applicable part of the Convair Contract, or at the time of the delivery by Hughes to Northeast of The Aircraft, whichever the case may be, and in the further event there shall not then be due and unpaid any obligations owing from Hughes to Convair with respect to The Aircraft, Hughes will agree that Northeast may defer its reimbursement to Hughes of a substantial part (the exact amount to be set forth in the definitive contract) of Hughes' $2,626,650 down payment to Convair for The Aircraft. The amount of such deferred reimbursement shall be evidenced by a promissory note executed by Northeast in favor of Hughes and delivered concurrently with the payment of the cash consideration. Said note shall provide for such term, interest rate, and number and frequency of installments as may be agreed upon between Hughes and Northeast and consented to by The Chase Manhattan Bank. Hughes will consent to such reasonable subordination provisions as may be required by The Chase Manhattan Bank, to the end that the repayment of Northeast's note to Hughes may not interfere materially with Northeast's repayment to The Chase Manhattan of the loan or loans arising under

[R-2946] the Credit Agreement of September 30, 1955, as amended July 15, 1958.

5. *Consent of Third Parties.* The definitive contract shall by its own terms provide that the effectiveness thereof shall be made expressly subject to and conditioned upon such consents as may be necessary from the Civil Aeronautics Board, Convair, The Chase Manhattan Bank, and Irving Trust Company as trustee under those certain Equipment Trust Certificates issued by Northeast pursuant to Agreement of July 15, 1958.

6. *Necessary Extension of Northeast's Route Certificate.* The definitive contract shall provide that same may be terminated by either party thereto without obligation or liability to the other at any time subsequent to December 15, 1959, if on or before December 15, 1959 there shall not have been issued and become final and unappealable an order of the Civil Aeronautics Board, or such other governmental agency then having jurisdiction in the premises, by which Northeast is granted, with respect to its route between New York, New York and Miami, Florida, an appropriate Certificate of Public Convenience and Necessity which shall be either (a) permanent, or (b) effective on a temporary basis through a date not earlier than November 1, 1968.

[R-2947] 7. *Customer Furnished Equipment and Related Spares.* Northeast will purchase from Hughes, in addition to The Aircraft, such spare parts, spare engines, and items of equipment which constitute "Customer Vended Equipment" under the terms of the Convair Contract, as shall, prior to the date on which Northeast's obligation to purchase The Aircraft becomes firm and unconditional, have

been purchased by Hughes for installation in or in support of The Aircraft. The price to be paid by Northeast for such related equipment shall be an amount equal to Hughes' cost thereof plus interest at the rate of 5% per annum calculated from the date of each of Hughes' respective outlays therefor to the date of payment by Northeast.

If the foregoing basic terms appear to be generally in accordance with our prior discussions, and if Northeast desires to continue negotiations for a definitive contract along the lines hereinabove set forth, kindly so indicate by executing the enclosed copy hereof in the space provided below and returning such executed copy to us.

Very truly yours,

HUGHES TOOL COMPANY

by .....
Vice President

ACCEPTED THIS DAY OF JULY, 1959:

NORTHEAST AIRLINES, INC.

.....
President

EXHIBIT A 7

[R-2948]

STRAIGHT TELEGRAM

FEBRUARY 18, 1960
(BY PHONE TO WU)

DAVID A. STRETCH
1050 FIFTH AVENUE
NEW YORK, N. Y.

THE FOLLOWING IS STATUS RESPECTING CONVAIR JET EQUIPMENT FOR NORTHEAST AIRLINES MOST OF WHICH IS ALREADY WELL KNOWN TO YOU. FIRST WE HAVE COMPLETED NEGOTIATIONS WITH CONVAIR FOR SIX PLANES WITH DELIVERY STARTING NEXT FEBRUARY OR MARCH AND CONTRACTS NOW BEING DRAWN. SECOND I AM IN DIRECT NEGOTIATION WITH HOWARD HUGHES TO SUBSTITUTE FROM FOUR TO SIX OF HIS EARLY DELIVERY CONVAIR JETS FOR EQUAL NUMBER OF OUR LATER DELIVERIES AND SUCH NEGOTIATIONS ARE WELL ADVANCED. THIRD WE ARE IN EARLY STAGE OF NEGOTIATION WITH DELTA TO SUBSTITUTE SOME OF THEIR EARLY DELIVERIES IF HUGHES DOES NOT DO SO. FOURTH WE HAVE CONVAIRS COMMITMENT THAT THEY WILL SUBSTITUTE THE PLANES FOR EARLIER DELIVERY TO CAPITAL AIRLINES IF FOR ANY REASON CAPITAL DOES NOT GO THROUGH WITH THEIR PURCHASE. FIFTH WE ARE THEREFORE IN DIRECT NEGOTIATIONS WITH ALL PARTIES CONCERNED WHO HAVE ANY CONVAIR JETS FOR DELIVERY EARLIER THAN THE ONES WE ARE GETTING AND NEED NO HELP IN THESE RESPECTS AND FURTHER I BELIEVE YOU HAVE BEEN IN DIRECT CONTACT WITH THE CAPITAL AIRLINES PERSONNEL ABOUT THESE SAME MATTERS.

FLOYD B. ODLUM.

CHARGE ATLAS CORPORATION

EXHIBIT A 8

[R-2949]

DRAFT
15 February 1960

Northeast Airlines, Inc.
Logan International Airport
Boston 28, Massachusetts

Gentlemen:

Reference is made to the Letter Agreement dated 22 January 1960 between Northeast Airlines, Inc. (hereinafter called "Northeast") and General Dynamics Corporation (hereinafter called "GD") covering the lease by GD of six (6) Convair 880 aircraft to Northeast and to letter to Northeast dated 22 January 1960 and signed on behalf of GD by Mr. J. V. Naish, President - Convair Division, relating to certain adjustment of the aircraft delivery dates if Hughes Tool Company, prior to 15 February 1960, agreed to defer the delivery of any of the Convair 880 aircraft to be delivered under its contract with GD.

Said Letter Agreement provides, among other things, that in the event the conditions set forth in paragraph 2. thereof have not been accomplished on or before 15 February 1960 and a mutually satisfactory Lease Agreement between the parties has not been completed, executed and received by GD prior to 15 February 1960, then said Letter Agreement is void and of no further force and effect. Northeast has requested that GD extend the date by which said Lease Agreement is to be so executed and GD for and in behalf of the considerations hereinafter set forth is agreeable to so extend said date as follows.

GD hereby agrees (1) to amend said Letter Agreement by deleting the words and figures "15 February 1960" wherever the same appears in paragraph 3. of said Letter Agreement and to insert in place thereof the words and figures "15 March 1960" and (2) to extend from February

15, 1960 to March 15, 1960 the date appearing in said separate letter pertaining to adjustment of delivery dates.

In consideration of the extension set forth above, Northeast agrees that if the conditions set forth in paragraph 2. of said Letter Agreement have not been satisfied and the Lease Agreement referred to in paragraph 3. of said Letter Agreement has not been completed, executed and received by GD prior to 15 March 1960, or such later date as may be agreed to in writing between Northeast and GD it will pay to GD fifty percent (50%) of GD's actual costs paid or incurred with respect [R-2950] to said six (6) Convair 880 aircraft during the period 15 February 1960 to 15 March 1960, provided, however, that the total amount payable by Northeast to GD hereunder shall not exceed $50,000.

Except as amended hereby, all other terms and conditions of the Letter Agreement and separate letter referred to in the first paragraph hereof shall remain in full force and effect.

If the understandings and arrangements herein set out are acceptable to Northeast, please so indicate by executing two (2) copies of this letter in the space below provided for your signature and by delivering to GD said copies, thus constituting this an agreement between us.

Yours very truly,

GENERAL DYNAMICS CORPORATION

s/ J. V. NAISH
President—Convair Division

Accepted and agreed to
as of the 15th day of February 1960

NORTHEAST AIRLINES, INC.

By .....

Title .....

EXHIBIT A 9

[R-2951]

4:50 PM

3-19-60 HRH . pp. 3

Trying to get figures compiled. Can he talk now. 1st of all wants to talk to me as a friend in a difficult time. i.e., divorced from the Bank. May think he is vacillating. You know how I work but won't divorce myself from Bank. I will respect confidence but this big secret may be not repeatable to others. Can he explain on a hypothetical basis? Ans. Yes. He wants to be conscientious. Will ask us to take his word. He will do exactly what he promised—this is thinking out loud.

The big piece of information—very secret—no whisper—H. is confident that he can about say that it is almost agreed that he concluded a merger with N.E. Airlines. Has made a deal OK to Odlum & Stretch (new head of N.E.). This takes CAB approval but Odlum waited until CAB stat. on mergers which fits this merger. Talks with CAB have given Odlum off the record OK of a merger with Amer. or TWA. (United has never sought this but Amer. has.) H. feels there is a substantially better than 50-50% of OK by CAB. H. believes merger will be Ok'd & they will get So. transcontinental route approval. This will be "Tops" in route system.

This would be a common stock exchange deal. N.E. was trying to lease 6—600's for Miami route—so much economy from merger (Ticket offices—terminal facilities—advertising, etc.) This deal is 80% done. In any event will take over on an operating basis almost at once.

Next—a separate deal but simultaneously—now going on—another deal—This is simpler but not as sure. i.e., a 40% chance of completing. For practical purposes so far he is in accord with Odlum to leave Atlas on 22

B. of A. CARVER

EXHIBIT A 10

[R-2952]

on vacation

10-13-60

10-13-60

pp 1

at 2:30 I called R L G because H R H called me (a) 11.45 AM Bob said he talked to H R H this AM—Told him of decision—Met. agreed to go only if D. R. plan thru as drawn—Really TWA could refund with points but Tool Co could not apparently Equit. told Met. this is too tough —so now Tool Co can purchase notes after 1st year (a) 124% of par reducing ¼% per ¼. Now a wire from Equit that stand by extended to Monday.

Bob told HRH we were sympathetic but there appeared to be nothing we can do. What he wants is a few days, then he can dispose of 880's (½ of them anyway) Wants to pay Equit & Banks & get some time to finance the plane purchases. Bob mentioned Tool Co debt to us and to Irving Trust & this must be taken care of

RLG said if Equit stands by for a week & Irv stand by for 60 days we can take another look—but no hopes expressed.

RLG then went over it against with NB & Shanley & concluded couldn't put together another unsound plan on piece work basis.

end talk 3:10

Needed			220 M
Restricted by TWA		8.5	
Cancel 13—880 & get Credit		58	66.5
Se need to finance			153 5
	Crown	30	
	Convair	10	40
B of A	45		
Chase	35	= 115 M	
1st	35		113.7

22 M's not covered—Nor are 600's—get out 6 to NE

B. of A.—Carver

T-19

EXHIBIT A 11

[R-2953]

Hughes 11/14/60 1:30 pm 11-14-60

N/E matter completely resolved
Re: getting Naish's consent to cancel 7 planes, prefers to let it wait until mid afternoon until after the N/E matter resolved in every detail in Convair legal Dept.

Forrester came on the line

Will give 7 indep directors out of 18—to preserve the subsidiary concept

Quoted Equitable as having told Cook that they'll go on any one 3 basis:

1. Full voting trust if they put new money in.
2. 5 yr. schedule w/o voting trust or change in mgmt provided it is part of a type of 9/26 program
3. (?) Immediate payment of somewhere between $8 & 16 mm and continue for 6 mos to 1 yr on the balance.

Our present plan better than either 2 or 3

Forrester wants Eq. to go longer than 5 yrs. Hughes discouraged this, inasmuch as it might upset the apple cart

Let Crown break the trail—Forrester & Hughes concur

Hughes suggest he will put the 7 independent members in, but don't tell it to Crown or Eq. Use it only as a counter offer.

He will Naish's answer on 7-880 cancellation to Keath tonight

B. of A. GORDON

EXHIBIT A 12

[R-2954]

9-9-60

TWA Financing Plan

Memorandum of understanding relative to TWA financing reached among the so-called TWA Bank group on Friday, September 9, 1960, all of the banks being represented except Security-First National Bank, Los Angeles; California Bank, Los Angeles; and National Bank of Commerce, Houston, whose approval and agreement were obtained by telephone either concurrently with or subsequent to the meeting of the banks.

The following funds are to be provided:

Balance of cost of 19—CV 880's	$ 64,753,000
Balance of cost of 6—CV 600's	24,947,000
Interim bank loans	27,000,000
Equitable loan to be continue as is	—
	$116,700,000

Under this proposed plan, Equitable Life Assurance Society would continue its present matured loan without immediate reduction but on monthly amortization over a five-year period beginning immediately. Equitable would release to the extent of $15,000,000 its present hold on rentals on aircraft owing by TWA to the Hughes Tool Company. Equitable's loan would continue to be guaranteed by the Hughes Tool Company and such guarantee would be supported by collateral mentioned hereafter pari passu with the other lenders, including the Convair Division of General Dynamics Corporation. Interest rate 6%.

Exhibit A 12

Funds to accommodate the above financing would be supplied by the following banks and by Convair:

Irving Trust Company	$13,500,000
Bank of America	13,500,000
Bankers Trust Company	13,500,000
Mellon National Bank & Trust Co.	13,500,000
Security-First National Bank	8,000,000
First National Bank of Boston	5,000,000
California Bank	2,400,000
National Bank of Commerce	700,000
Convair	35,000,000

The following assumptions and/or conditions underly the plan, which admittedly is barely adequate to accomplish what needs to be done and then on only a stopgap basis, it being understood that TWA and Hughes Tool Company will as soon as possible arrange permanant financing:

1. There are 4—CV 880's on order by Hughes Tool Company and 7—CV 22M's from the Capitol Airlines deal similarly on order, the financing of none of which is contemplated in this plan, tacitly or otherwise or in any other financing plan. On the contrary, it is understood that the Hughes Tool Company will dispose of these planes so as to relieve themselves of liability therefor well within any time limitations prescribed by the purchase agreements. It is understood also that arrange-

ments have been [R-2955] made on a contingent basis, by Howard R. Hughes or Hughes Tool Company, but not by TWA, for the purchase of an additional 7—CV 600's for which no financing has been approved and no indication of intention to finance has been given. Howard R. Hughes or Hughes Tool Company is to agree to make proper disposition of those planes also within the limitation of the terms prescribed for their purchase.

2. It is intended that the existing airplane loans of Hughes Tool Company will continue in a reduced amount as set forth below. The entire financing is to have the approval of the CAB to the extent that such approval can be obtained. Because it is intended that this financing is stopgap financing only and that as soon as practicable and possible full refinancing of the fleet would be brought about on a long term basis, all of the lenders, including Equitable would agree to permit prepayment of their loans in full without penalty, irrespective of the rate of interest at which such refunding may be made.

3. The Convair Division of General Dynamics Corporation would carry up to $35 million of the financing on a basis pari passu with the lenders as to the collateral but with payment deferred until the banks shall have been paid.

4. TWA is to pay to the Tool Company $15 million on accrued airplane rentals and the Hughes Tool Company is to use the said $15 million to reduce

its airplane loans made by Irving Trust Company and Bank of America, $3 million and $12 million respectively.

5. The bank loans would be written at 6% interest with equal monthly amortisation (or the equivalent modified to be compatible with season income patterns) sufficient to liquidate the indebtedness over a five-year period. There would be a provision for a contingent earnings sinking fund equivalent to 75% of net earnings of TWA, after taxes, to be applied on latest maturities. There would be a commitment commission on the unused portion of the bank commitment equivalent to ½ of 1% per annum, payable quarterly.

6. The management clause and provision for voting trust called for in the Dillon Read plan would continue as part of the new financing.

7. All aircraft are to be held in the name of TWA. Aircraft now held by Hughes Tool Company and leased to TWA would be sold to TWA on a conditional sales contract. The collateral held by Tool Company banks would be assignment of such conditional sales contract in lieu of chattel mortgages and payments on said conditional sales contract would be only such amounts as would be necessary to meet the payments on the bank loans secured thereby until such time as the bank loans would be repaid.

Exhibit A 12

[R-2956] 8. Hughes Tool Company would subordinate to lenders its entire present investment in the airplane program except for the amount of $15,000,000 permitted to be paid by TWA to the Tool Company for repayment to Irving Trust Company and Bank of America.

9. There are to be no aircraft purchases or leases or commitments relating to purchase or lease, et cetera, by or for TWA or Hughes Tool Company or any other company or individual which would involve TWA or Hughes Tool Company, either directly or indirectly, without the written consent of the lenders, including Equitable Life Assurance Society, holding at least 66⅔% of outstanding obligations under this plan.

10. There would be no merger or plans to merge, no consolidation or plans to consolidate, or other similar or dissimilar deals involving TWA or Hughes Tool Company, without the written consent of the lenders, including Equitable Life Assurance Society, holding at least 66⅔% of outstanding obligations under this plan.

11. There would be no borrowings by TWA or Hughes Tool Company without the written consent of the lenders, including Equitable Life Assurance Society, holding at least 66⅔% of outstanding obligations under this plan.

12. Loan agreements in connection with the new financing would follow for control purposes the loan agreements prepared under the Dillon Read plan.

These would include, but not be limited to, working capital limitations and guaranties thereof by Hughes Tool Company.

13. No action will be taken by the lenders in connection with anything requiring the approval of Mr. Hughes unless approval thereof by Mr. Hughes shall have been first received by the lenders in writing.

14. Howard Hughes Medical Institute would furnish its financial statements regularly to Bank of America to be held in confidence by them and Bank of America would indicate to the lending banks whether in its opinion the $18,000,000 note held as collateral is regarded by them as being good collateral.

Subject to the foregoing assumptions and/or conditions, the essence of this financing plan is as follows:

Hughes Tool Company debt to Irving Trust Company would be reduced $3 million and its debt to Bank of America would be reduced $12 million to the following figures:

Hughes Tool Company then owing to Irving Trust Company	$14,286,666
Hughes Tool Company then owing to Bank of America	34,782,011
	$49,068,677

B. of A.—GORDON

Exhibit A 12

[R-2957] This indebtedness would be collateralized by the following:

First liens on: 11-Boeing 707—131's
4-Boeing 707—331's
H.H.M.I. note approximately $18 million
Approximately 5¼ million shares TWA stock owned by Hughes Tool Company
Hughes Tool Conmpany real estate comprising approximately 1,300 acres in Culver City, California; approximately 25,000 acres in Las Vegas, Nevada; approximately 16,000 acres in Tucson, Arizona; and approximately 88 acres in Houston, Texas.

New TWA bank loans aggregating $83,600,000 and Convair loans for $35,000,000 to be collateralized as follows:

First liens on: 6—CV 600's
20—CV 880's
7—Boeing 707—331's

The above bank loans of $83,600,000, Convair loan of $35,000,000 and the Equitable loan of $27,000,000 are to be guaranteed by the Hughes Tool Company. To support its guarantee Hughes Tool Company will provide a second lien on all of the collateral listed above which is held to secure bank loans to the Tool Company aggregating $49,068,677.

B. of A.—GORDON

EXHIBIT A 13

[R-2958]

Discuss with Hughes. 9-18-60 7:05 pm I called

Q. How many of the 4 extra CV 880's does TWA need and you will approve their buying provided they can be financed?— A. Two only— Get rid of them later if possible. Hold out 2-880's for Tool Co. to dispose of as they see fit. A good trading position for Hughes. Convair wants 2 of them for N/W as an inducement for N/W to buy 600's

Q. Will you pass this word along to them as they can figure accordingly? A. If any of the 4 get to TWA & are withdrawn for Convair—might be subject to some smart lawyers attack. Prefer to hold all four out. If necessary to complete financing will give up 2-880's.

Q. If necessary to firm up the financing will you immediately release them. A. Yes.

Q. I understand from Keath that TWA doesn't want the 22m's and you don't want TWA to have them. Is my understanding correct? A. Hughes thinks it would be a mistake to commit TWA to take them. Would prefer to hold them out. TWA may want them later if the 880 advertising program gets hot.

Q. How do you propose to relieve the Tool Company of the obligation of $25,750,000 in connection with the 22m's & how soon can this be done? A. 1. Wants to start negotiation with Convair for another 17-600's to total 30 in all. these to be financed by Convair. Can't be resolved until the 880 gets into service & catches on with the public. The 17-600's would presume disposal of 15-131's. Convair to finance the 4-880 & the 7-22m's in addition to the new 17-600's Collect $50 million from charity on R/E purchase & pay-off of 18 million note— on borrowing basis.

B. of A.—GORDON

EXHIBIT A 14

[R-2959] 10-24-60

Hughes 10/24/60 9:45 am he called asked how many sails we'd have to cut adrift

Told him about Houston bank report—Cook out trying to get loan on oil properties

Says NY (?) trying to get him into court this afternoon—Cook says an effort to get Hughes Tool Co & TWA into receivership this afternoon—Cook now talking to Keehn to call him off

Hughes had Crown's atty talk to Crown to ask him to go to his bank this afternoon. Said he wouldn't like it but would do so.

Drury to come in to see us to firm up conditions precedent

Forrester is supposed to be here or on the way here representing Merrill Lynch.

Has talked with Jack Naish.

Naish has had an inquiry from the Air force for 7—880's and an inquiry from a company which would lease another 7 to Nat'l Airlines

Wants our permission to let Hughes Tool Co commit firm for 6—600's so the first 6—880's for N/E can be firmed up by Convair—The 600's would be deliverable in next July & August He can't see how the possibility of a receiver would affect anything Tool Co might do in the purchase of 600's for alternate use by TWA. I told him this would have a vital affect.

How would the 600 deal affect his net position? HRH says only in this way a) at present committed for 6—880's & increased about $4—5,000,000 in cancellation of 6—600's. If N/E could finance the 6—880's then Hughes Tool Co would be better off than if they could not cancel the 600 order Would be worse off to the extent of cancellation costs.

B. of A.—GORDON

EXHIBIT A 15

[R-2960]

10-27-60 Called HRH 9 PM

he called back & will call me in AM

10-28-60 He called 8:30

TWA BD meets this AM.—Told Cook what is in air—So Cook have Board authorize Leslie to seek financing based on a group of Bks headed by B of A.—Told him all eggs in 1 Basket—no blunders—don't do anything w/o of A OK.

HRH told Cook (11 of 18 directors there) to make resolution at once that since meeting called to consider financing but deal blew up now only routine purposes but something must be done. Cook said call for full Board as soon as can get there—Ben objected—wanted to know when—adjourned to 4:30 Mon P.M. (Ben wanted TWA resolution to favor DR plan & put onus on Tool Co for rejection)

Sent work to M.L. at once as Forrester & Linniss not out here yet.

Nat'l Bk of Comm. give legal-limit & small banks feel it is resolved & could put group together but can't do it now. Total debt about 12,000,000—can get 4½ so need 7½ for his personal. Can get latter out of Oil—partners name Thayer—Sessel—Leslie & Wright voted against Rays motion & Maestre abstained.

Leslie wants to be Pres (Talked to Cook this AM)

Has OK'd sale of 7 planes to Nat'l & 7 to Govt.

9:10—RLG got on phone—went over suggested program thoroughly HRH—demurred on going East (1) health—maybe OK (2) Convinced Sessel & group determined to get control of TWA & doesn't want to tell his details to "enemy".

B. of A.—CARVER

EXHIBIT A 16

[R-2961]

but Howard has proposed that down payments on 880's be applied to first airplanes taken.

He doesn't know whether any progress being made on 14-880's.

Nat'l. Airlines deal seems to be moving faster than the air force deal.

He will let us know of any developments. If Crown won't go for M. L. Hughes will ask for his suggestions & let us know—we may then make suggestions.

Hyland 11/7/60 He called 9:55 am

Gave such assurances as we could to encourage his support.

B. of A.—GORDON

EXHIBIT A 17

[R-2962]

11-11-60 11-11-60 / pp 2

HRH says Bautzer will agree that Crown knew before he ever came West that money would not go to G. D.

Crown talked on basis that 880's

NE deal—1 point unresolved. Crown to arbitrate it. Naish has HRH's complete authority to sell 14 planes—(in spite of what Naish told Gully & the Col:)

What do you want on 880's? Up to G.D.? Prefer to see them go to TWA but can't finance them.

If GD sees D.R. plan won't go thru & bankruptcy alternative, then must find a way to help TWA. HRH is sure that G.D. must help—did help Capital—N.E. etc.

HRH is to call me

If Crown welches in this deal, this will be the 5th one and none of them HRH's fault.

Says (1) Told Crown in Chicago

(2) Crown knew & talked about paying off Equity & getting their collateral—

(3) Re-applying deposit on some planes & easier to finance balance

So he knew 1st 880's go to NE & hoping to unlock 6-880's for TWA if deposit were applied. So knew no money for G. D.

HRH Gets confidential (Convair wants me to take Dillon Reed deal to get cash for planes—but pretend not to keep in HRH's good graces.

If Crown deal goes then G.D. won't sue him for contract performance.) So they mustn't know that B of A became agent bank & accept terms on basis of last occasion but during period of closure reserve right to get around vote trust

B. of A. CARVER

EXHIBIT A 18

[R-2963]

10-19-60 6 P.M. HRH. called.

Amplifier attached to wire outlet with hand phones for me.

He will go into Receivership first

after I said we wouldn't give him 30 MM loan

Thinks he can get Gov't help—

Pay the Banks the TWA loan

Tender Equit. a proposal for repay't of their loan

HRH will contend Equit has no real right to immediate payt. (no consideration for change in agreement—Will give 1st pay't along with it.)

Will offer a shorter pay off—as collateral. If they then throw TWA in receivership it is up to them.

Will offer all 880 for sales at once.

Glass or Austin as Pres. at once.

Go along on Boeing until 600 come along—making best of what we have has always been OK in the long run (1649 as example) 15-120 can go to fan engines if needed. Sell 880 & get some money back. Henry Crown has said again he wants to go into deals with HRH—Wants us to look at collateral for his loan. • • • Will (1) send some one in to see RLG in the AM.

(2) who should be President?

We will accept either as previously stated—as I ~~Glass~~ remember it Austin might be the better of the 2 as of now because he has been a Pres.—Potentially Glass maybe be the better but we have no strong ideas on subject.

B. of A.—CARVER

EXHIBIT A 19

[R-2964]

11-1-60

He related his long conversation with Crown. Said he made it clear that maybe the D-R plan would be best for G D but he was quite sure he'd let the Co. go into receivership rather than the D-R plan. Told Crown he'd buy all his future planes (near future, I think he meant) from Convair. Also, that if a receivership were the result, a receiver would have to buy competitively.

Gave Crown an out but Crown said he wanted to go ahead and would call Pace & correct some statements. Told him of Counsel's opinion re: the loan of $12,000,000 from HHMI to HT Co. Loan should run to the end of the present lease or maybe a year before—3 to 4 years at 6%—or could be shorter term, whatever terms bank decides.

Property will be that now under lease from Ht Co. to _____ Drury should know this. Cook to ask Drury to tell us. Asked if it looked like we could put the deal together. I said it looked like it was getting closer.

H. told me that Crown has a letter from 1st N/B of Chi regarding his N/W rather than a statement. Hughes expects us to take the Equitable note (which Crown will buy) as additional collateral.

He will give us a letter re: the Tool Co. TWA debentures & will make a deal with M-L the same as the HHMI deal & Forrester will give us the necessary assurances. Hughes still a little nervous vis a vis G.D. Warned that they might try to upset the Crown deal. He plans to "level with Naish".

B. of A. GORDON

EXHIBIT A 20

[R-2965]

Keath 3:30

Hughes does not want the D-R deal now. Cook to call within half hour and read letter he and Cook have been preparing for Equitable.

Next Tuesday Bd. will meet. Sessel's resignation will be requested—Glass may be put in as president. Exec. offices to be moved to L.A. etc. (may be only for publicity) (Keath will be at Frontier 9-1487.)

No problem on R/E deal between Tool Co. and HAC.

Says we can have complete reliance on him in future dealings with him.

Naish is working on plane deal to get rid of 880's & 22M's.

Trying also to firm up the N/E deal but will have to firm up the 6-600 deal.

Have learned his lessons will not ask us to finance Convairs for him. Will keep 880's only if someone comes along with financing of them.

Asking us to

Do $30 MM Crown deal to pay off Eq or $40 MM HHMI Crown deal. Is meeting to work on Irving deal. Be at office at 10 a.m. tomorrow.

3:55 p.m.

EXHIBIT A 21

[R-2966]

BEFORE THE
CIVIL AERONAUTICS BOARD

Docket No. 1182

In the Matter of the Application of

HUGHES TOOL COMPANY

for approval under Section 408 of the Civil Aeronautics Act of 1938, as amended, of the acquisition of control of

TRANS WORLD AIRLINES, INC.

MOTION OF TRANS WORLD AIRLINES, INC.
FOR APPROVAL OF TRANSACTIONS WITH
HUGHES TOOL COMPANY

TRANS WORLD AIRLINES, INC. (hereinafter referred to as "TWA") respectfully moves that the Board enter an order herein modifying its Order Serial No. 3210, issued October 17, 1944, as amended, approving the acquisition of control of TWA by Hughes Tool Company (hereinafter referred to as "Hughes"), so that the terms of such order will not restrict the right of TWA to purchase from Hughes Tool Company up to 25 jet powered aircraft suitable for operation by TWA on both its domestic and international routes.

1. Thorough studies have been made by TWA of the characteristics of all jet aircraft available in this country and abroad. None of these aircraft has the range desirable for all-year around operations across the Atlantic so as to permit non-stop services in both directions under the extreme conditions frequently encountered on that route.

2. During the past few years important new [R-2967] developments have occurred affecting jet aircraft which

make it possible to design aircraft at this time that are superior in performance, safety and economy to the commercial aircraft now being constructed, the designs for which were initially laid down four or five years ago.

3. Hughes Tool Company has indicated to TWA that, subject to approval of the Board, it is willing to construct jet transport aircraft for TWA's use, taking into account the most recent design developments, on terms that are at least as favorable in every respect as those that can be secured from any manufacturer for a similar aircraft. Deliveries of such aircraft will commence in 1961. The aircraft will be used interchangeably on TWA's international and domestic routes.

4. Hughes Tool Company has advised TWA that it is willing to sell such aircraft to any other airline at the same price as sold to TWA.

5. Hughes Tool Company has also advised TWA that the aircraft would be constructed by the Aircraft Division of Hughes Tool Company in a new factory to be located in accordance with the recently announced policy of the Air Force to insure the widest possible dispersal of aircraft production facilities.

WHEREFORE, Trans World Airlines, Inc. respectfully prays that the Board enter an order herein modifying the Board's Order Serial No. 3210, as amended, so that the terms of such order will not restrict the right of TWA to acquire from Hughes Tool Company the aircraft as referred to above, and providing such other and further relief as may be appropriate.

Respectfully submitted,

TRANS WORLD AIRLINES, INC.

By Warren Lee Pierson
Chairman of the Board

May 10, 1956

T-37

EXHIBIT A 22

[R-2968]

UNITED AIRCRAFT CORPORATION
EAST HARTFORD 8, CONNECTICUT

OFFICE OF THE
PRESIDENT

April 5, 1957

Mr. Howard R. Hughes, President
Hughes Tool Company—Aircraft Division
Florence Avenue at Teale Street
Culver City, California

Dear Howard:

Following your telephone call to me this week we have discussed among ourselves your request for Pratt & Whitney Aircraft's assistance and cooperation in selling the excess J57 and J75 engines which you have on order.

It has, of course, been our practice when a customer has in his possession more Pratt & Whitney Aircraft engines than he requires, to do all possible in assisting such a customer in their sale. However, in your case, you do not now possess more engines than you need, but rather you have on order some 200 more engines than you require for TWA. There is no necessity of your taking delivery of these engines, because we have offered you the privilege of a no-charge cancellation if requested immediately, and have also told both TWA and your representatives that we would agree at this time to an assignment of these 200 engines to Boeing.

As you will no doubt recall, your orders for a total of 300 engines were placed by your representatives just prior to our price deadline on February 15, 1956. We remonstrated with your representatives because of the large quantity of engines desired to be purchased, and pointed out that TWA could not possibly need such a great

quantity of engines, and that our analysis of Boeing's orders indicated to us that Boeing had already ordered installation engines covering TWA. However, there was no time prior to the deadline to check TWA's actual requirements, and in the interest of permitting acceptance of your orders prior to the deadline, we accepted them with the understanding with your representatives that any duplicating orders would be cancelled following a reconciliation of actual requirements.

Now you apparently are contemplating going through with this rather large order and marketing these engines in competition to Pratt & Whitney Aircraft. You further ask our cooperation and assistance in [R-2969] disposing of these engines. As I told you during our phone conversation, complying with your request would place us in a pretty untenable position. If we were to assist you in disposing of your speculative order of some 200 engines, we would certainly be encouraging others of our good customers to similarly speculate, which would place us in a completely impossible position.

I hope that you can be sympathetic to our point of view and understand that we must refuse your request. I hope that on further consideration of this matter you can accept at this time either our offer to cancel on a no-charge basis, or our offer to accept an assignment of these excess engines to Boeing.

Again I should like to urge you on your next trip East to pay us a visit in Hartford and see both our development and production facilities. We have some very excellent tools for the work at hand and think we are doing a good job on both the J57 and the J75. I am sure that with your extensive aviation background you would find such a visit interesting.

Sincerely yours,

BILL
W. P. GWINN
President

WPG:rga

EXHIBIT A 23

[R-2970]

LB017

WESTERN UNION

TELEGRAM

L LLU062 HL PD AR=TDL PWS SEATTLE WASH APR 15
HOWARD HUGHES=
7000 ROMAINE ST HOLLYWOOD CALIF=
WITH REGARD TO AN ASSIGNMENT BY HUGHES TOOL TO BOEING OF ITS CONTRACT TO PURCHASE JET ENGINES WE ARE SETTING FORTH HEREINAFTER OUR PROPOSAL WITH RESPECT TO SUCH ASSIGNMENT.

¶ 1. HUGHES TOOLS COMPANY REPRESENTS THAT IT HAS A FIRM CONTRACT WITH PRATT AND WHITNEY FOR THE PURCHASE AND SALES OF MODEL JT3C-4 AND MODEL JT4A-3 PRATT AND WHITNEY AIRCRAFT ENGINES TOTALLING TWO HUNDRED SUCH

= END 1 =

(copy sent Air Express to Raymond Cook in New York 4/16/57
copy sent to Cook's Houston office—airmail—4/16/57
copy to Bill Gay
read to R. W. Rummel by telephone—4/16/57
original to Operations—4/16/57)

Exhibit A 23

[R-2971]

WESTERN UNION

TELEGRAM

L L LLU062 LONG SHEET 2=

ENGINES IN THE AGGREGATE, THAT BY THE TERMS OF SAID CONTRACT THE PRICES FOR SUCH ENGINES ARE $145,000 FOR EACH MODEL JT3C-4 ENGINE AND $210,000 FOR EACH MODEL JT4A-3 ENGINE, THAT HUGHES TOOL COMPANY HAS THE RIGHT TO ASSIGN ITS INTEREST IN SAID CONTRACT.

¶ 2. HUGHES TOOL COMPANY AGREES TO ASSIGN TO BOEING ITS RIGHT UNDER SAID CONTRACT TO PURCHASE ALL 200 OF SAID ENGINES SUBJECT TO THE FOLLOWING CONDITIONS =

¶ /A/ BOEING WILL ACQUIRE JT-3C-4 ENGINES SUBJECT TO PARAGRAPH 2 /F/ BELOW AND WILL PAY TO HUGHES TOOL COMPANY THE AMOUNT OF $10,000=

END 2 =

Exhibit A 23

[R-2972]

WESTERN UNION

TELEGRAM

L LLU062 LONG SHEET 3=

FOR EACH OF FIFTY JT3C-4 ENGINES. THIS AMOUNT TOTALING $500,000 WILL BE PAID ON THE SAME PAYMENT SCHEDULE THAT WOULD BE IN FORCE HAD HUGHES TOOL COMPANY ORDERED THE ENGINES AT THE DATE HEREOF AND TO THE DELIVERY SCHEDULE OF THE HUGHES TOOL COMPANY AGREEMENT WITH PRATT AND WHITNEY. IT IS UNDERSTOOD AND AGREED THAT THE $10,000 PER ENGINE WHICH BOEING AGREES TO PAY TO HUGHES REPRESENTS THE DIFFERENCE BETWEEN THE CONTRACT PRICE AND THE PRESENT SELLING PRICE OF SUCH JT3C-4 ENGINES AND HUGHES TOOL COMPANY AGREES THAT IN=

END 3 =

Exhibit A 23

[R-2973]

WESTERN UNION

TELEGRAM

L LLU062 LONG SHEET 4=

THE EVENT THAT THE SELLING PRICE OF ANY ENGINES WHICH WOULD HAVE BEEN PURCHASED AS OF THE DATE OF ACCEPTANCE OF THIS AGREEMENT FROM PRATT AND WHITNEY IS REDUCED PRIOR TO THE DATE THE FINAL PAYMENT IS DUE UNDER THE HUGHES TOOL COMPANY AGREEMENT THE PAYMENT BY BOEING TO HUGHES TOOL COMPANY WILL BE REDUCED IN A LIKE AMOUNT.

¶ /B/ BOEING WILL, IMMEDIATELY UPON ACCEPTANCE BY HUGHES OF THIS OFFER, PAY TO HUGHES A SUM EQUAL TO THE AMOUNT OF PAYMENTS HERETOFORE MADE TO PRATT & WHITNEY BY HUGHES ON =

END 4 =

T-43

Exhibit A 23

[R-2974]

WESTERN UNION

TELEGRAM

L LLU062 LONG SHEET 5=

ACCOUNT OF THE PURCHASE OF SAID ENGINES PURSUANT TO THE TERMS OF THE CONTRACT BETWEEN HUGHES AND PRATT & WHITNEY.

¶ /C/ BOEING WILL AGREE TO MAKE ALL FUTURE PAYMENTS TO PRATT & WHITNEY REQUIRED BY THE TERMS OF THE CONTRACT BETWEEN HUGHES TOOL COMPANY AND PRATT & WHITNEY AND TO SAVE HUGHES TOOL COMPANY HARMLESS FROM ANY LIABILITY WITH RESPECT THERETO.

¶ /D/ THE ASSIGNMENT TO BOEING OF HUGHES TOOL COMPANY'S INTEREST IN THE CONTRACT BETWEEN HUGHES TOOL COMPANY AND PRATT & WHITNEY WILL PROVIDE THAT BOEING WILL HEREAFTER BE CONSIDERED =

END 5 =

Exhibit A 23

[R-2975]

WESTERN UNION

TELEGRAM

L LLU062 LONG SHEET 6=

TO BE THE PURCHASER UNDER SAID CONTRACT AND THAT HUGHES TOOL COMPANY WILL HAVE NO FURTHER INTEREST THEREIN, AND THAT PRATT AND WHITNEY WILL AGREE THAT NO LESS FAVORABLE TERMS AND CONDITIONS WILL APPLY TO THESE ENGINES THAN WOULD APPLY UNDER BOEING'S EXISTING CONTRACT WITH PRATT & WHITNEY.

¶ /E/ THAT PRATT & WHITNEY APPROVE THE ASSIGNMENT CONTEMPLATED HEREBY.

¶ /F/ THAT PRATT & WHITNEY WILL APPROVE REALLOCATION OF THE ENGINES BETWEEN JT3C-4 AND JT4A-3 IN ACCORDANCE WITH THE EXCHANGE OF TELEGRAMS IN AUGUST 1956 BETWEEN

END 6 =

T-45

Exhibit A 23

[R-2976]

WESTERN UNION

TELEGRAM

L LLU062 LONG SHEET 7=

BOEING AND PRATT & WHITNEY RELATING TO THE ASSIGNMENT OF THE HUGHES TOOL COMPANY AGREEMENT.

¶ THIS OFFER WILL REMAIN OPEN FOR ACCEPTANCE BY HUGHES TOOL COMPANY UNTIL APRIL 17, 1957. FAILURE TO ACT ON THIS PROPOSAL PRIOR TO MIDNIGHT, APRIL 17, WILL REQUIRE OUR OBTAINING ENGINES ELSEWHERE. PLEASE INDICATE YOUR POSITION BY WIRE.

WILLIAM M ALLEN PRESIDENT BOEING AIRPLANE CO=

EXHIBIT A 24

[R-2977] CREDIT MEMORANDUM 10-26-56

Los Angeles Headquarters
October 26, 1956

HOWARD HUGHES

Ben Sessel called yesterday, stating that he had attended the TWA Board meeting in Los Angeles on Wednesday. Apparently at that time Lloyd Wright introduced a motion instructing Noah Dietrich to be prepared to recommend the name of a new president for TWA at the next Board meeting. Failing that, Lloyd said he would introduce his own candidate. This was conveyed to Noah Dietrich, who was home ill, who then talked with Howard Hughes. Hughes apparently stated he felt the Board was pressing him, but that if they felt such action was proper, they should so vote. As a result the action was passed.

Ben then referred to a letter addressed to the banks, requesting authority to purchase three more Boeing 707's. Bob Gordon and I had discussed this preliminarily early in the week, and were prepared to give approval provided the documentation was satisfactory. Surprisingly, Ben had prepared a letter, which, in effect, stated that the banks were concerned about the expansion of purchases without financing, that the projection was out of date but that a substantial cash deficit was anticipated in the near future; therefore, the banks would withhold their consents until permanent financing had been arranged.

When we inquired what steps he would suggest in the event Mr. Hughes went forward anyway, there was no satisfactory solution available. We then reviewed our general philosophy; namely, that Mr. Hughes is difficult to control and his actions are irritating, but that it seemed wise to go along on minor matters, and not come to a "showdown" unless the matter is of considerable con-

sequence and we are sure of our ground. It was suggested, for example, that he probably would be taking on $15,000,000 worth of new 707's under this program, but, on the other hand, might well be selling $25,000,000 or $30,000,000 worth of surplus jet engines. Ben then stated this is just about what he will do, and that he will sell the engines at a net profit of $15,000 an engine. I also mentioned that these three new planes would give TWA a plane for training [R-2978] purposes several months

B. of A.—CARVER

before any of its competitors would have one, and that as a result of trading the engine commitments, TWA would be in a most satisfactory position as against its competition in obtaining the new jet planes.

In view of this, we suggested to Ben that the letter be rewritten to show that we do approve of the acquisition of the three new planes, but that we recommend Hughes Tool arrange their long term financing as soon as is practical; that they provide us with new projections that are realistic in relation to their revised purchase and operating schedules, and that they reduce their other commitments by at least the $15,000,000 of new plane orders that are being placed.

Ben seemed to be in accord with this and agreed to call this morning. Bob Kerr called Bob Gordon about the matter and had redrafted a letter, which, however, was still quite critical and on the negative side. After discussions with Nolan Browning and Tom Deane, Bob drafted an entirely new proposed letter, which is being sent to the Irving Trust Company today. Presumably Bob Kerr will let Bob Gordon know on Monday or Tuesday if our suggested letter meets with Ben Sessel's concurrence.

s/ KEATH L. CARVER,
Vice President.

B. of A.—CARVER

EXHIBIT A 25

[R-2979]

HUGHES TOOL COMPANY
AIRPLANE PROGRAM PAYMENTS FORECAST

* * *

NOTE:

Hughes Tool Company purchased 300 engines from Pratt & Whitney of which 140 were subsequently assigned to Boeing Airplane Company. Under the assignment Boeing agreed to pay Hughes ½ of the difference between Hughes' contract cost and Pratt & Whitney's present sales price, but not to exceed $5,000 for each of 100 small engines (JT3C-4) and $7,500 for each of 40 large engines (JT4A-3), totaling $800,000, of which $40,000 has been received by Hughes. The figures in the above schedule do not include the $800,000.

EXHIBIT A 26

[R-2980]

"Since engines were generally in short supply, at least during the initial period, or it was thought they would be, because everybody, Douglas, Lockheed—excuse me—Douglas and Boeing, was clamoring for engines, and engine availability . . . ." (Tr. Rummel-962) (R-13,608)

EXHIBIT A 27

[R-2981]

FOR IMMEDIATE RELEASE 2/7/56

News from . . .

TWA
TRANS WORLD AIRLINES

Hughes Buys Boeing Jets for TWA

Los Angeles, February 7—Howard Hughes today announced the purchase of eight jet-stratoliner airplanes from Boeing Airplane Company by the Hughes Tool Company which in turn will make the airplane available to its subsidiary, Trans World Airlines.

"This is the first step in providing TWA with jet airplanes," Hughes said. He added that, all told, 30 jet aircraft would be ordered for TWA "during the next few months."

Boeing has contracted to deliver the eight airplanes, which cost approximately $4½ million each, during April, May, June, July and August of 1959.

Discussions are being had with the Boeing Airplane Company concerning additional airplanes for deliveries following these, the announcement said.

The jet-stratoliner model 120 has a top speed in excess of 600 miles per hour and a maximum cruising speed of 575 miles per hour. This, Hughes said, will reduce the flying time from Los Angeles to New York to four hours and fifteen minutes.

The planes will be equipped with an advanced type of engine silencer which will increase passenger comfort and reduce the take-off noise level.

Exhibit A 27

Mr. Hughes said that the planes on order from Boeing would be equipped with four Pratt & Whitney jet engines.

The jet-stratoliner is 134½ feet in over-all length, has a wing span of 130 feet, 10 inches, and will carry a pay load of 31,500 pounds.

GG:cr . . . 020756

—TWA—

T-52

EXHIBIT A 28

IR-2982

Sessel 10/8/58 11:12 a.m.

He called me.

Said he called Bill Gay last night and followed through as per yesterdays agreement. Gay said not to write letter or wire that he had better ask Hughes to get in touch with us immediately.

At TWA meeting both Cook and Holliday present. Neither had heard from Hughes—pointed out that Hughes Tool has not yet agreed to furnish jet planes to TWA.

Re: discussion of purchase of jet simulators by Tool Co. for use by TWA—Cook said Hughes Tool Co. had NO intention of selling or leasing their stuff (jet planes implied) to TWA—just as Sessel was explaining this (several TWA directors had immediately jumped on Cook) our telephone line appeared to open up (a click like a lifted receiver) whereupon we terminated the conversation at once. Sessel said matter could wait.

He closed by saying that nothing had happened since his call to Gay.

B of A GORDON

T-53

EXHIBIT A 29

[R-2983]

HUGHES TOOL COMPANY

EXECUTIVE OFFICES

TWENTY-SECOND FLOOR GULF BUILDING

HOUSTON 2, TEXAS

November 1, 1957

Mr. Carter L. Burgess, President
Trans World Airlines, Inc.
380 Madison Avenue
New York, New York

Re: Purchase of Spares and Customer Furnished Equipment for Jet Aircraft

Dear Mr. Burgess:

Hughes Tool Company has ordered a number of Boeing Model 707-131, Boeing Model 707-331 and Convair Model 880 jet aircraft. For various reasons Hughes Tool Company can not yet commit itself to TWA with respect to these aircraft, either as to type or number; but, on a basis to be determined later, it is expected that some jet aircraft will be made available to TWA. Hughes Tool Company proposes, therefore, that TWA handle the purchase of spares and customer-furnished equipment for these jet aircraft under substantially the same procedure which was followed last year for piston equipment. Specifically we propose that TWA act as a special agent for Hughes Tool Company for the purchase of (a) customer-furnished equipment which may be specified in the purchase contracts and (b) spare parts and equipment which in the judgment of TWA would be necessary for the operation of the jet airplanes by TWA.

Exhibit A 29

By letter dated November 21, 1956, Mr. John A. Collings, then Executive Vice President of TWA, notified the undersigned that TWA's estimated costs for CFE and spares under the several purchase contracts (less engines but including "ground support equipment") would be $52,357,000.00. We suggest that the estimate be reviewed and (with reasonable itemization) either verified or revised on the basis of current information. Until we have approved the revised estimate, and in any event until further notice, TWA's authority to make purchases on behalf of Hughes Tool Company under these contracts will be limited to the following:

1. Spare Parts less Engines:

Boeing Model 707-131	$10,000,000.00
Boeing Model 707-331	$10,000,000.00
Convair Model 880	—NONE—

2. Ground Support Equipment ..... —NONE—

HCT: HOUSTON

[R-2984]

3. Customer Furnished Equipment	$ 3,500,000.00
TOTAL	$23,500,000.00

Within the limits of the monetary authority stated above, TWA is authorized to execute and deliver purchase orders in the name of Hughes Tool Company. The undersigned should be furnished with a copy of all purchase orders, and all amendments to purchase orders materially affecting price, but need not be furnished with miscellaneous correspondence in the administration of the purchases. When deliveries are made to the satisfaction of TWA, statements approved by TWA should be transmitted to the undersigned for payment. For planning

purposes we should also be furnished with any schedules or estimates prepared by TWA relevant to deliveries and payment dates.

For the time being, we prefer not to authorize any purchase commitments in connection with the Convair 880 program. When it becomes necessary to place orders for any material quantities of spares or CFE for the Convair aircraft either to protect delivery or price advantages, please notify us promptly and we will obtain either authority or instructions concerning such purchases.

We assume that the purchasing activities contemplated by this proposal will be conducted by TWA personnel regularly engaged in such work and that the additional overhead expenses thereby incurred by TWA will not be significant enough to justify a separate accounting. In the event that for any reason TWA does not ultimately use any of these aircraft, Hughes Tool Company will reimburse TWA on some reasonable basis for such overhead costs.

If this proposal is acceptable to TWA, please so acknowledge on the copy attached.

Yours very truly,

C. H. PRICE

CHP:bp

Approved on Nov 11, 1957
TRANS WORLD AIRLINES, INC.

By Carter L. Burgess
President

cc: Mr. George Spater
Mr. R. W. Rummel
Mr. R. A. Cook

EXHIBIT A 31

[R-2986]

Telephone Conversation JAC—RWR

Management position (RWR) 1956

1. Not interested at $4,000,000.00
2. Thinks it is best airplane for TWA if purchased in realm of $3,100,000.00
3. Thinks market is limited but on information that PAA will buy 30 thinks Convair may sell 150 ships and therefore recommends going forward with the deal provided contract is changed to exclude "fundamentally dissimilar" and substitute "outgrowth of design"
4. If contract is not so changed recommend not purchasing these aircraft

Added items—CAA insured for $20,000 to $25,000 but would not hang deal up on this.

T-57

EXHIBIT A 33

[R-2988]

12/30/59—Ben Sessel

1) Holliday swaying Sessel & B. of A. revised HTC figures Holliday advised Ben they show crisis for Jan. 7 or 11 when next Boeing is due to be delivered in amount of about $2,500,000.00—needed

Next three months HTC will need $29,000,000.00—HTC then plan $2,000,000.00 & spares TWA is buying up to 31+

2) Bill Gay called Sessel to ask him whether he believed HH understands B. of A. isn't putting up any more money. Asked Sessel to ask Carver to call HH. Sessel said Carver would not call HH again or this was his opinion.

3) Charlie Thomas called—very upset about Lockheed discussions. Sessel advised Thomas to tell HH TWA won't take Electras. Thomas said he couldn't do this. Decided to wait until January 7, Directors meeting

4) Sessel would pass on to Gay word that we were working on a revised plan which he thought sounded very interesting because it would add up to a less potential dilution. Gay is to pass this word on to HH in hopes he may call Brandi.

EXHIBIT A 35

[R-2990]

HOLLIDAY, RAYMOND

Mon., 2/20/61

3:30 p.m. Regarding GE engines—have been advised by GE that if HTCO wants to cancel the ten excess CJ805's it must do so by Monday 2/20.

4:00 p.m. Advised.

7:30 p.m. Cancel the engines provided we have the privilege to reinstate.

Regarding the Convair negotiations: I urge as follows: Regarding the claim that I would take AAL specs for the model 600's—this is true as to the original specs and at no time have I indicated any hestitation or uncertainty concerning the acceptance of the original AAL specs. At no time did I say that HTCO would take any subsequent change orders placed by AAL without approval of same first.

Convair's argument "why obtain TWA's opinion regarding 3% of the airplanes when TWA will not accept the other 97% is completely improper for the following reasons:

It is not up to Convair to decide whether TWA will accept the so-called 97% of the airplanes. This has never been a matter for discussion. However I obtain TWA's acceptance to this is my own problem; most likely HTCO will control TWA when that matter comes up.

In any event, it is not Convair's worry; the 97% is HTCO's problem.

Now, regarding the 3%; Convair is mistaken in saying it is HTCO's fault that this matter was not resolved because HTCO failed to give decisions; this is an invalid and improper decision

which Convair is seeking to take; for this reason we do not want these 3% of changes. We have a signed specification and that specification is the airplane we want. Failure by HTCO to accept changes ordered by AAL simply means by omission that HYCO has elected to take the airplanes without any changes and contractually unless you and R. Cook have permitted a default by failure to make payments, Convair is obligated to give us the airplane in accordance with the original specifications.

If Convair says HTCO has failed to give a decision with respect to the change orders the answer is simply we failed to order the changes when offered and therefore I say again we elected not to take the changes and this is the way we want the airplane. Convair has no right whatsoever to bill HTCO for the 70 thousand dollars. HTCO demands the airplanes according to the original specifications and does not want any of the changes.

At no time have we agreed to take blanket changes by AAL or any of them for that matter and I do not want them. In other words, Convair wants an answer regarding the change orders and here it is: The answer is no regarding all change orders regarding the original specs. Quite obviously Convair wants HTCO to accept these change orders in the interest of saving Convair money which naturally results from making the HTCO plans identical with the AAL planes. If Convair went ahead and put some of these changes into the HTCO planes it was done not because Convair thought we wanted them and not because Convair was uncertain as to whether we wanted them but simply because Convair wanted to

EXHIBIT A 36

[R-2991]

7/11/60

Hughes has a razzle-dazzle deal on 600's.

Has orders for 4-880's. If Convair can sell these to others H. T. gets a substitute order (first call) on 4-600's. Tool Co. is supposed to lease 6-880's to N/E—Don't know whether these include the above 4—think not. In any event, gets either the 600's or 880's.

Total cost of 600's is $26,061,768.00

Hughes has credit in these of $6,515,442.00. from cash payment & some finegeling (?)

Additional cash outlay $19,546,326.00 payable as follows:

7-31-61	$3,257,721.00	1 plane del.
8-31-61	6,515,442.00	2 planes del.
9-30-61	6,515,442.00	2 planes del.
10-31-61	3,257,721.00	1 plane del.

Holliday in process of working out a cash flow sheet, through Sept. 1960—why no further. Holliday says can't go further. Kerr smells a rat—thinks may contravene HT loan agreement.

Holliday told Ben today that $25,000,000.00 will fill bill for time being. Kerr confesses he is lost—wants to sit down with Holliday & find out just what intentions re: plane purchases.

Thinks someone should talk straight with Hughes re plans. Thinks maybe we should all sit down together.

B. of A. GORDON

T-61

EXHIBIT A 37

[R-2992]

11-7-60

I was at home—RLG called about 11:30

11-7-60

RLG & NB called me. Crown deal appears to be "on" HRH thinks 50,000 shrs.—Crown 1,500,000—now down to 500,000 shrs.—HRH wants a ceiling & right to buy Crown's option. Bob suggested Merrill Lynch as an arbitrator.

Bob talked to Kerr already (Kerr & Ben are not together on this—maybe a moratorium)

Cook in San Diego to close NE deal—HRH gave in to G. D. on price on 600's No progress on sale of 14-880's. If Crown won't go Merrill as arbitrator HRH will call Bob

Pat called RLB & Bob encouraged him to go ahead. Tucson appraiser (Valley Bk.)

		Val. over $10,000,000
11,000 acres—	raw land —	$10,000,000
Houston	14,450	
CC	53,000,000	

Greg called—Ready to draw agreement—Crown wants us there. All in complete agreement. Time at 2:30 Bob told Kerr who will tell Grant Keehn

---

10 PM HRH called—I was in bed—want to arbitrate—I told him Crown protested & we feel better to settle now—he seemed irritable & adamant. I told him to call us am.

B. of A. CARVER

EXHIBIT A 38

[R-2993]

Questions—ask Howard Hughes
Equipment Program

In 4 mos from 8-29-60 H says that he plans to sell 15-131's to Amer. Airlines & take their position in 600's.

He may cancel 880 order checked 720's in flight, 880 is faster than 720's. He wants theirs if he can raise more.

1. Who is to own the planes? (20-25-30—880's)
   he doesn't care—TWA OK
   ordered 30 & 7 Capital—last are 22 M i.e. improved 880—option of 1 more.
2. How is it planned to finance their purchase?
3. Thirty 880's were ordered originally. TWA was to take 20. Hughes Tool Company was to retain 5. What about the other 5?
4. What does the Tool Company intend to do with the five 880's (or 10 as the case may be)?
   6 to go to NE—H H will buy 6-600 to replace these—i.e. with 11-880's—trade them or cancel
5. How are the five 880's (or the 10) to be financed?
6. What about the 880's in the Capital deal?
   a) How many are there? (7)
   b) Is it planned to integrate all or any portion of these into TWA?

Exhibit A 38

7. Are any of the original 30—CV880's intended for Northeast Airlines?
Convair will lease to N East

8. If so, how is it expected that these will be financed, by whom and when?

30—880's
6—N E
24—N East. planes—of financing covers 20 of these.

B. of A. CARVER

EXHIBIT A 39

[R-2994]

9-15-60

OK
RLG

9-15-60

H.H. had a battle with Ray Cook about not getting into the meetings etc. Finally HH said he is fed up on this thing. Jack Naish said no one trying to put the deal together—Jack said. Cook left out—Leslie in hospital & representation not adequate. —H. has said Cook & Holliday should represent him. Result—he has full authority—gave him news in full detail with authority to act. has given 2 days to get some action.

H. again off of Ben S.—I diverted—

Ironic that: HH equity control is real bad yet TWA has 880 & Amer & United have Electras. TWA only big line that. hasnt Electra's. H.H. says this accident not related to others but the public doesn't.

H.H. would prefer not to finance the 6-600's. but let Tool Co do it at a later date—Maybe 600's wont ever go to T.W.A.—6 not enough to do anything with

Prefer to do only 880's.

Capital—will do 10,000,000 with GD for 3½ years—HH still is not convinced he can't insist on 7 years—

T-65

Exhibit A 39

They dealt with atty since fired by Cook's firm.
Will get some money out of charity 1 way or another—
maybe a loan 7 repay $18,000,000.

9-15-60—Bob Kerr told RLG that figures & new plan will go out tonight so should have Friday

Cook called Bob about HH's talk. H feels Cook should be in the discussions more—(Kept out by design.)

B. of A. CARVER

T-66

EXHIBIT A 41

[R-2997]

AMENDMENT No. 1

to

Purchase Agreement dated 10 November 1960

by and between

GENERAL DYNAMICS CORPORATION
(Convair Division)

and

HUGHES TOOL COMPANY

THIS AGREEMENT (hereinafter called "Amendment No. 1") entered into as of this 22nd day of February 1961, by and between GENERAL DYNAMICS CORPORATION, a Delaware corporation, having an office (Convair Division) at San Diego, California (hereinafter called "Convair") and HUGHES TOOL COMPANY, with its general offices at Houston, Texas (hereinafter called "Buyer"):

WITNESSETH:

WHEREAS, Buyer and Convair have entered into a Purchase Agreement dated 10 November 1960 relating to the purchase and sale of six (6) Convair 600 aircraft (said Purchase Agreement hereinafter referred to as the "Agreement"); and

WHEREAS, Buyer and Convair now desire to amend said Agreement to provide for the purchase and sale of seven (7) additional Convair 600 aircraft; and

WHEREAS, Convair's Detail Specification Report No. ZD 30-010 dated 1 August 1958, Revision 4, dated 16 November

1960, together with Addendum III dated 3 May 1960 referred to in the Agreement does not properly describe [R-2998] the aircraft which are the subject matter of this Agreement; and

WHEREAS, Buyer and Convair desire to amend said Agreement to properly describe said aircraft and to otherwise reflect the agreement of the parties hereto;

Now, THEREFORE, in consideration of the mutual covenants herein contained, the parties hereto agree to and do hereby amend the Agreement as follows:

1. By deleting paragraph (a) of Article 1 in its entirety and substituting in lieu thereof the following new paragraph (a):

   "(a) Six (6) Convair 600 aircraft (hereinafter called "Group A Aircraft") and seven (7) Convair 600 aircraft (hereinafter called "Group B Aircraft"), both groups sometimes hereinafter collectively called "Aircraft". Such Aircraft shall be manufactured by Convair in accordance with the terms of this Agreement and Convair's Detail Specification Report No. ZD 30-010 dated 1 August 1958, Revision 4 dated 16 November 1960, together with Addendum III dated 3 May 1960 and Report ZM-645 dated 11 January 1961, revised 21 February 1961 (hereinafter collectively called "Detail Specification") as set forth in Exhibit A attached hereto and made a part hereof, as the same may be modified pursuant to Article 5 hereof."

2. By deleting Article 2(a)(1) in its entirety and substituting in lieu thereof the following new Article 2(a)(1):

Exhibit A 41

"(1) The Aircraft shall be tendered for delivery to Buyer, serviced except for fuel, ready for flight, not later than the last day of the month set forth in the following schedule:

[R-2999]

Group A Aircraft

Month of Delivery	Number of Aircraft
December 1961	One (1)
January 1962	Three (3)
February 1962	Two (2)

Group B Aircraft

February 1962	One (1)
March 1962	Three (3)
April 1962	Three (3)"

3. In Article 3, paragraph (a), by deleting the figure "$26,061,768" and inserting in lieu thereof the following figure: "$56,467,164".

4. By deleting Article 3(b) in its entirety and inserting in lieu thereof the following new paragraph (b):

"(b) Payments. The total price of the Aircraft purchased hereunder shall be paid as follows:

(1) An initial installment payment applicable to Group A Aircraft in the amount of $3,257,721, receipt of which is hereby acknowledged.

(2) Two (2) additional installment payments applicable to Group A Aircraft as follows:

Amount	Due Date
$2,606,176.80	February 1, 1961
$2,606,186.80	May 1, 1961

The above installment payment due February 1, 1961 may be made in the form of a negotiable promissory note bearing interest at the rate of six percent (6%) per annum payable to Convair and due and payable June 1, 1961.

[R-3000]

(3) An initial installment payment in the amount of $5,827,700.90, together with interest thereon at six percent (6%) per annum from February 1, 1961 until paid, applicable to Group B Aircraft, upon execution of this Amendment No. 1. Said installment payment may be made in the form of a negotiable promissory note bearing interest at the rate of six percent (6%) per annum dated February 1, 1961 payable to Convair and due and payable June 1, 1961.

(4) Two (2) additional installment payments applicable to the Group B Aircraft as follows:

Amount	Due Date
$2,153,715.55	June 1, 1961
$2,153,715.55	November 1, 1961

(5) The balance of the Base Price of each Aircraft increased or decreased as the case may be by Change Orders, if any, pursuant to Article 5 hereof upon tender of delivery in accordance with Article 2 hereof, of each of the Aircraft manufactured in accordance with the terms of this Agreement and the Detail Specification."

Exhibit A 41

[R-3001]

Except as specifically amended hereby, all terms and conditions of the Agreement shall remain in full force and effect.

Executed in quadruplicate the day and year first above written.

GENERAL DYNAMICS CORPORATION

By .....

Title President—Convair Division

Attest:

HUGHES TOOL COMPANY

By C. H. PRICE

Title Vice President

.....

Assistant Secretary

EXHIBIT A 42

[R-3002]

12-13-54 Ben Sessel

———in L.A.

HH may have a 102 problem proposes now contract to buy 75 MM in planes from Lockheed (way ahead of DC-7) 3 MM cost each.
Standby 2½ or 3 yrs—for 35 MM thereafter TWA will take down
wants to confine it to bank in the personal loan
Irving will take 12 500 M only if planes are certificated or could be leased or sold to TWA

EXHIBIT A 44

December 23, 1954

[R-3004]

CONFIDENTIAL

TELEPHONE CONVERSATION WITH MR. HUGHES THE EVENING OF DECEMBER 22, 1954

Last evening, December 22, was the climax of several months' intensive activity which resulted in Lockheed signing contractual papers for the acquisition of twenty-five (25) Lockheed Model 1449A type aircraft by the Hughes Tool Company, with right of assignment to TWA by Hughes Tool, without Lockheed's consent.

It became apparent early in negotiations that the Model 1449A as proposed by Lockheed will be fundamentally uneconomical because the fuselage size will not permit carrying enough payload to produce sufficient revenue to have a reasonable break-even load factor. Seating capacity is virtually the same as previous models, while operating costs are substantially higher. Balancing this to some extent is the higher speed of the airplane which will tend to promote the sale of more seats than would otherwise be the case.

I have steadfastly maintained, and pointed out to TWA Management, who has concurred, and personally to Mr. Hughes, as well as to Lockheed representatives, that I believe the airplane as proposed to be an unsound project, primarily because of over-all economical aspects. I have also pointed out ways whereby this condition could be rectified by LAC making it an attractive, worthwhile project.

Numerous discussions were held with Lockheed representatives re operating costs during which period Lockheed raised its operating-cost-per-hour estimate from $486.92 to

$541.95, TWA's cost-per-hour estimate being $615.58. This compares to $410.39 for the Douglas DC-7C. These cost figures included here are for domestic operation only.

During the evening of December 22, Lockheed centered its activities in the small walnut-lined conference room downstairs to the left of the lobby at the Beverly Hills Hotel, Hughes Tool Company occupying the Promenade Room to the right of the lobby. Hughes Tool representatives were Ray Cook and Mickey West. TWA observers and commenters were Harry L. West, Ralph L. Ellinger, Edward S. McCarthy and the writer. Lockheed representatives were Leonard Schwartz, Kirk Yost, Walter Wayman, Ben Brundred and Rodgers Donaldson.

I explained a second time to Ray Cook in the Polo Lounge immediately following dinner why any present deal should be made contingent upon final resolution of the specification satisfactory to both parties, why risk associated with CAA certification warranted special contractual protection, and that Hughes Tool should not consider Lockheed's price for the airplane firm because of the very incomplete airplane specifications. My personal estimate of airplane price relayed to Mr. Cook was that each airplane would cost approximately three million dollars when delivered, rather than the $2,690,817.00 stated in the Contract.

The discussions with Ray Cook and Mickey West continued in the Promenade Room, during which time I pointed out that Contract LD-111 between TWA and Lockheed was handled in precisely the manner I was recommending in this instance, and that I estimated that this handling resulted in saving TWA a million and a half dollars in that instance. I also stated that much more would likely be saved in this instance if the same procedure were followed. In my opinion, LAC, if pushed, would have

agreed to this contingency. LAC's willingness to go along with this condition was confirmed by Kirk Yost following the signing. He stated that LAC [R-3005] had approached Hughes several days earlier urging that no papers be signed until specifications were agreed upon and that Mr. Hughes turned this down.

During the discussions, Leonard Schwartz came to the door and advised Ray Cook that Mr. Hughes was on the telephone and wanted to talk to him. Cook asked that I accompany him to the telephone in the Lockheed quarters, which I did. Cook pointed out to Hughes that I had serious objections to the form of contract being proposed and urged Hughes to discuss these points with me. Mr. Hughes, who was calling from Palm Springs, where he had arrived late that afternoon, elected to talk to me.

Howard opened the conversation by asking what I had done about the price of seats. As background information, several weeks ago Mr. Damon mentioned in a telephone conversation with Hughes that Lockheed's price was less passenger seats. Mr. Hughes asked me a day or so after his conversation with Mr. Damon if Mr. Damon's statement was correct. I replied that it was my understanding that it was, but that I would re-check the specification status and determine whether seats were still called out as C.F.E. I advised him about one day later that seats were not included. That followed a conversation with Leonard Schwartz during which time Leonard explained how Lockheed had arrived at this position. I relayed all this to Mr. Hughes, after which he instructed me to follow pricing carefully in order to advise him later of how Lockheed had arrived at its final price, and whether or not I considered it fair. The morning of the 22nd Mr. Hughes instructed me by telephone to insist that LAC include passenger seats in the quoted airplane price. In reply to

Exhibit A 44

Hughes' direct question the evening of December 22, I stated I had talked to Schwartz about the seat price again, and that he had maintained his position. He then talked to Leonard Schwartz, who pointed out to Howard he was a little unhappy that this item should come up at this time, particularly in view of his earlier conversation with me on this subject. Leonard then advised Howard how Lockheed had determined that passenger seats were not part of the airplane price. The statements were essentially parallel with his earlier conversation with me, which I had relayed to Howard. Howard then talked to me again and stated that Leonard had explained how the price was arrived at, and he was satisfied.

I pointed out again, as I had done before on several occasions, including the morning of the 22nd, that the airplane specification, in my opinion, was not sufficiently complete to be suitable for use as a contractual instrument, and that I felt the most practical way to proceed in order to have the best possible negotiating position was to make the deal contingent upon resolution of specifications mutually agreeable to both parties by a date, such as March 1, or better yet, April 1, that being the estimated time required to do a reasonably complete job. I suggested the contract price could be tied to the specification as currently developed and made subject to additional reasonable costs or credits as specification resolution advanced. Mr. Hughes flatly rejected this proposal on the basis that he felt he must wind the deal up right away, and that he trusted Lockheed, that he believed Lockheed would do a good job, that he believed Lockheed would be fair because they knew that if they weren't we would not buy additional aircraft from them, that he felt I should be reasonable in my requests to Lockheed. I pointed out that what I was suggesting was exactly the form used in Contract LD-111

which resulted in a much better airplane for both TWA and Lockheed, and that the situation worked smoothly. He repeated that he felt he must conclude arrangements and that he thought Lockheed would do a good job and that the existing form of contract should be used.

[R-3006] I then pointed out to Mr. Hughes that in my opinion the airplanes would cost about three million dollars by the time they are delivered and that we were subject to high cost increases because of the pricing activities that Lockheed would indulge in as permitted by the proposed form of contract. Hughes stated that he had a verbal agreement with Bob Gross and Leonard Schwartz that Lockheed would not sell airplanes to others at a lesser price than to Hughes Tool, and that this agreement embraced the concept that if small quantities of airplanes were sold to other customers, that price differential in view of the relative quantities between such customers and Hughes Tool would be considered to exist in that appropriate price reductions from Lockheed would be considered part of his verbal agreement, and that for this reason he was not worried about the price.

I mentioned I felt the contract permitted unnecessary customer risk re CAA certification. He said with respect to CAA certification that he felt we should not raise this issue any further because Lockheed woould do a good job in this regard.

I pointed out to Mr. Hughes that Lockheed intended to exclude the "Hell, No!" list of items, the accomplishment of which I felt was vital to building a successful airplane. Typical items included were lengthening the fuselage by a hundred and twenty inches to permit carrying additional payload, installation of four-wheel type main landing gears to permit use at otherwise restricted airports, further evaluation of structural characteristics in light of possible

negative torque control failure, installation of power plant water injection, etc. Howard said he thought Lockheed would be willing to consider these items, and that they would be fair in their evaluation. He also stated that he felt Lockheed would cooperate fully. He asked that I contact him personally later on regarding any items that I felt Lockheed was being unreasonable on, and that he would handle those directly with Gross.

In closing the conversation with me, Howard again stated he trusted Lockheed and thought they would do a good job.

Following this conversation, papers were promptly executed by Lockheed and sent by special Hughes messenger to Houston to be available for the Hughes Tool Company Board Meeting today.

Mr. Hughes had negotiated a side letter agreement with Mr. Schwartz and Mr. Gross relating to the basic economy of the airplane. It stated in essence that the operating cost would have to be shown to be reduced by seven percent (7%) below the Lockheed estimated cost figure by March 1, or either party could cancel the contract.

s/ R. W. RUMMEL

RWR:JC

EXHIBIT A 45

[R-3007]

5/25/61

Re: TWA—Notes of Meeting with Chester Davis

FHB & I met with Mr. Chester Davis at his request. He talked with us for over an hour. Most of his speech covered the events of the period since May 10th —and was largely a repetition of what he had stated in the May 19th letter. He emphasized his desire to get relations back on a satisfactory basis between him and his firm and his firm and Lehman. Other remarks which were, or may be, significant include the following:

1) He emphasized that he had a letter from HH personally appointing him as V. P. & General Counsel for HTC. He said he had made it clear to HH that this empowers him to make commitments for the HTC which would be fully backed up by HTC Board approval when necessary. He offered to show us the letter.

2) In response to a direct question from FHB, he said HTC was going right ahead in accordance with its agreements with TWA to accept the Sub. Debs. which it is obligated to take upon conclusion of the offering to stockholders.

3) He said that we should know that his client had every intention of doing everything he could to "bust up the Boeing deal".

4) He indicated that he believed most of the other "positions taken" in his letter could be removed—that certainly HH had no objection to our efforts as financial advisor or our raising funds for TWA (but not for the Boeings). He emphasized this point by asking why TWA couldn't raise the new funds on "open account" and

Exhibit A 45

[R-3008]

then later decide what kind of planes it would buy. I explained that this simply wasn't a feasible way to finance in amounts of this size for an airline, even if TWA wanted to do it that way.

5) He volunteered that his client was worried most of all by the "Cahill study".

6) He said that he had insisted on the disclosure of HTC's possible positions vs TWA at this time for disclosure in the R.S. because if these disclosures were not made, HTC was liable as an underwriter and would therefore be effectively barring itself from raising the positions later if it allowed the R.S. to become effective without disclosing "its positions".

7) He asked if our three firms would be willing to sit down with him and Holliday to discuss a secondary on HTC's Sub. Debs. after they had them—say on or around June 15th. I replied that we had already advised Milner we would not say now that we would not be willing to discuss this matter at a future date but that what we would be willing to do at that time would depend on the situation existing at the time.

I emphasized that he was not in any way to construe my remarks as indicating that we would be willing to undertake this job for HTC. I emphasized that we were acting as investment bankers for TWA and that by his own statements at this meeting and in his letter of May 19th he had made it clear that HTC was taking an adversary position against TWA—threatening suits and stating [R-3009] positively that their objective was to "bust up the Boeing deal". Under these circumstances I asked him how we would possibly undertake the job for HTC. He said of course the situation might be corrected

by June 12th. I said that was of course possible and that was why I was not taking the position that we would not be willing to take a new look at the situation in the future. I said however that our position could only be changed if both we and TWA were satisfied with the changes which had taken place in their position.

8) Just as he was leaving he indicated that HH would feel much better if he could persuade the voting trustees to allow him more representation of the Board by men of more stature than HTC's previous representatives. I pointed out the voting trustees had originally tried to work on a cooperative basis—the HTC representatives had not cooperated and that in any event this was not a matter in which we as investment bankers for TWA had any part.

EXHIBIT A 46

[R-3010] 9-13-60

12

Hughes 4:30 he called Around 9/13/60

Leslie getting in men right away to work on the figures. Take $15,000,000 if that would buy 3-22M's—When Convair would have to finance.

Told him physically impossible to get bank clearance in time to present to Equitable in time for Tuesday meeting.

6:40 pm: Talked to Sessel & told him about talks with Hughes, everything but name of X & terms of contract. $22,000 deal, etc. Leslie on & $15,000,000 deal.

Things to resolve with Keath:

I feel we shouldn't buy anything unless absolutely supported by figures. B of A, being made to look bad on $15,000,000 payment requirement. We should be ready to state whether we will stand pat or offer an alternative, depending on what the figures show.

There are at least 3 alternatives:

1. Go along with the Tool Company loans only and get into the TWA picture as running room develops. This would make the other banks happy, I don't like it much.

2. Accept the 22M vs. 880 deal as proposed by Hughes, provided the figures make sense. This would give us an immediate pay down and would provide for extra payments on TWA loan as 880's are sold or better would necessitate reduced financing for TWA on 600's because of the introduction of new money into TWA from sale of 880's to others. This presents the possibility that the 880's may not be sold as planned.

EXHIBIT A 47

[R-3011]

FORRESTER, WM. A. JR.

Fri., 10/28/60

12:30 p.m. (Per Opr) Get him on the line.

INFO They talked.

2:00 p.m. Call him back and tell him that for his information that Charlie Thomas negotiated and developed the deal with Dillon Read financing plan without my authority or encouragement from me; he forced it down my throat then at a Board meeting at which time he created a coalition of my directors and turned them against me and faced me with a mass resignation of all but one of the TWA directors. I have never liked this plan; I have never been in favor of this plan; I have fought it from the very beginning and I am still fighting it and I assure you that if it is employed it will be over my dead body and if you would like to come up with any suggestions of an alternative plan or any way whatsoever by which I can avoid being forced into the Dillon Read program, I would be most grateful. It is very flattering for you to say that you don't think I have ever been forced to do anything and maybe there was a time when this might have been a fairly accurate statement, but I assure you it is not true today and has not been true con-

cerning this Dillon Read program from its inception. I have fought it hammer and tong from the very first day that I ever heard of it.

2:30 p.m. Ans: Advised.

Mon., 10/31/60

11:50 a.m. Must speak to HRH.

INFO Omit; they talked.

Wed., 11/2/60

8:20 a.m. Tell HRH I would like to talk to him. I think I've got a plan on a second problem of his which he asked me to think about and I think it will have a bearing on the first problem.

Wed., 11/9/60

12:25 p.m. (Per Holliday) Anxious to talk; at Mr. Gordon's request, Forrester is meeting with Gordon in the morning, and must talk before then.

2:15 p.m. Tell him that I have been on this deal with Crown and the Convair people this entire day and I am not going to be able to talk to him until tomorrow.

T-84

EXHIBIT A 48

[R-3012]

12-4-60

At my option & keep secret.

When deal is done—then at our discretion we will return it to him. (Ask Hugo—do I take as officer or personally?)

His plan to try to get them to go w/o signing because if hazard to Trustee so try to do it w/o signing—If can't do it

(1) Execute Bills document & get it in NY by 9 AM Monday. This will be done.

(2) Our 2 documents depends on Irv. action. That we hold it in Trust is confidential. (Tell Greg) Has read all of the documents and he says if I make a representation to Irving he will go ahead

(3) At our meeting both of us will attend.

(4) When Doc delivered RLG will not be there.

3 things came to HRH attention this week—anti-DR.—

(1) 102 Tax situation—It is real bad & 3 weeks before year end. —M L is better—have c/h of Board & only need to get 1 man (Nixon?) so he would have to set out at once to refinance.

(2) Very Confidential—Will be a bill introduced & will pass Gov't financing of Air Lines similar to Feeder line financing.

(3) Another Tax matter

end talk 10:53

B. of A. CARVER

EXHIBIT B

A. V. Leslie, "TWA, An Appreciation"

[R-3042]

TWA EXHIBIT 9

March 1960

TWA

An appreciation—

Background—

During 1956 Hughes Tool Company acting through Howard R. Hughes, placed orders for 18 Boeing 331, 15 Boeing 131 and 30 Convair Model 880 jet airplanes—(stated at the time, and reported many times since, to be for TWA use) plus spares and spare engines (somewhat later) in the order of 4.4 million. Total commitment was approximately 300.1 million.

R. W. Rummel, then Chief Engineer and now Vice President Planning of TWA and who is understood to be on Toolco's payroll, as well, acted for Hughes in negotiating the contracts and specifications and placing the orders for spares provisioning etc. for Toolco account.

It was stated by Hughes at the time the orders were placed (among others the writer) that TWA was not to concern itself with the financing of this equipment as he through Toolco, would find initially the required funds.

The first deliveries of this equipment, the 15 Boeing 131's took place during the period January—October 1959. Hughes not having arranged permanent [R-3043] financing, Toolco borrowed short term funds from Bank of America—Irving, using the airplanes as collateral and they in turn were leased to TWA on a day to day basis cancellable by either party on one day's notice. CAB granted approval of this arrangement as required under the Toolco control case of 1944 for a period until June

30, 1959 on the general understanding that within the period, permanent financing would be arranged.

Such leases also reqiird the consent of the Equitable Life Assurance Society holders of TWA's 3¾'s 1969 of which 34 million were outstanding at that time (and 31 million at present). Equitable indicated that it would not approve such leasses. Even so, the lease agreements were executed by Toolco—TWA but no lease payments have been made to Toolco; due to lack of necessary consent and accruals at year end were 8.3 million.

The planning of the Finance Department had assumed that the provisioning spares and spare engines for the program would be provided for in the long term financing package. Failing this however, Toolco during May 1959 requested that TWA purchase the 15 million of 131 spares required and this was done from current cash.

[R-3044] In this connection in May and July, CAB granted approval for continuance of lease to September 30, 1959 and for TWA to purchase Toolco spares and engines. On September 30, CAB extended right to lease the 15 Boeing 131 planes "until permanent financing arrangements are completed".

During November deliveries against the Boeing 331 contract commenced and five have been leased to date of March 9. Motion filed with CAB November 6, 1959 and granted 29 January 1960, providing for lease of 8 Boeing 331 and 8 Convair 880 planes and purchase of spares and engines therefor on order by Toolco. No time limit was placed on such leases.

The spares orders by Toolco for 12 Boeing 331's was 8.4 million, for engines 8 million and for 30 Convair 880's spares, 2.5 and engines 9 million. Some 5 million more of Convair spares must be ordered by either TWA or Toolco to place this fleet in operation.

"TWA, An Appreciation"

During mid 1959 with lack of financing, Hughes achieved agreement with TWA (as the result of a study by Rummel) that it did not require the full block of airplanes on order. Thereafter 6 of the order for 18 Boeing 331's was sold to Pan American with proportionate spares and engines and TWA was given to understand it would receive but 20 of the 30 Convair 880's on order.

[R-3045] Thus TWA's present planning is predicated on a substantially lower number of planes than was thought necessary during 1956. The initial planning of TWA's jet needs appears to have been a matter of decision between Hughes and Rummel—approved by TWA and not an initial appraisal of needs by TWA concurred in by Toolco.

Failing long term financing Toolco has been able to handle the plan to date:

(1) By pledging 18 of the 20 planes (15 Boeing 131's—5 Boeing 331's) against short term bank loans from Bank of America—Irving.

(2) By sale of 6 Boeing 331's to Pan American.

(3) By inducing TWA to purchase the Boeing 131 spares and spare engines, 15 million and to purchase 20 Boeing 331 spare-engines; 4.3 million—a total of 19.3 out of cash working funds.

(4) By delaying the delivery of Convair 880's through the device of having them removed from the production line before completion. Three should by now be available to TWA for training. It is understood that contract delivery dates have been allowed to be set forward from March and April to May—which will delay scheduled service until July—missing the peak traffic month of June. [R-3046]

(5) By putting forward the contract date for delivery of Boeing 331 airplanes—concomitant with the Pan American sale of February delivery date airplanes to April and March airplanes to May.

As of this writing, the banks appear to have refused to loan more funds (and may be up to their loan limit) and as of March 10;

(a) Two Boeing 331's which have been accepted for delivery for Toolco's account by TWA engineers are resting at Boeing since February 29 and March 4 without funds made available by Toolco for this purchase. Balance required approximately 8.2 million. Next plane is due for delivery April 24.

(b) A Link Simulator for the Convair 880 under Toolco order has been accepted for delivery by TWA Engineers without funds provided by Toolco. Balance of Purchase price requirement—$375,000.

(c) Some 4.9 million of Boeing 331 spares and 7 million of Convair spares under Toolco order have been delivered to TWA depots. From the dunning received and passed on to Toolco—a major portion must be overdue in payment—with an additional 2.5 million scheduled for delivery during March.

[R-3047] Under present circumstances it is impossible for TWA to make any forward plans—for placing in service of the 20 Convair 880s and 7 Boeing 331's which were anticipated to produce a major part of system earnings during 1950.

"TWA, An Appreciation"

Management of TWA is caught in a dilemma:

When and if the airplanes are delivered, trained staff must be on the payroll in all departments to care for the increased activity. Yet, there can be no justification for the costs of such staffing and purchase of needed spares by TWA on its own account if the equipment is not to be made available and on a timely basis.

Without the equipment it is probable that TWA will be financially embarrassed by the year end—since 1960 in any event, has been forecast as a year of but modest profit.

Despite the situation which exists with Toolco unable to meet obligations during the next six months of some 125 million of which some 30 million is due in the next 60 days, information has come to hand that Hughes is negotiating for a further large fleet of Convair jet airplanes of the 600 model.

Financing Negotiations to date.

During October of 1958, Hughes employed First Boston Corporation on a fee basis of $25,000 per month to devise a plan for financing the TWA-Toolco jet [R-3048] program (Apparently the firm was suggested to Hughes by officials of Lockheed. Studies were made by this firm through December 1958. At that time George Woods, Chairman of First Boston, informed Hughes by telephone conversation that their work had progressed to a point that a face to face discussion and decision for definitive action was indicated. Hughes is said to have refused to meet Woods and First Boston then bowed out of the picture.

During February 1959 Hughes commissioned Dillon Read (along with Lazard-Lehman) to work up a financing

plan with compensation entirely out of underwriting fee, if done. Finance Department worked closely with the Dillon Read group on the development of a plan which was passed upon as to Revenue and Earnings potential through 1961, by Coverdale and Colpitts.

This has been called the May 18 plan. Hughes found fault with this plan and a number of variations were prepared, none of them acceptable to him. The last one was dated during August 1959 and since that time, Dillon Read has done nothing. Nor has any other group.

Despite the passage of time and building up of a foreseeable financial crisis, TWA has not been given freedom to seek such financing with assurance of .min- [R-3049] imum equity supplied by Toolco necessary to support the practical maximum of debt.

As the situation stands, Toolco has run out of cash funds and bank credits with 125 million jet program requirements yet to be met, while TWA has spent some 53 million of its funds in provisioning, ground support equipment, training and rentals with planes held only on a day to day basis.

It would be a euphemism to say that Toolco's immediate financial position is precarious.

To develop the argument

Assume Toolco shows a net profit after taxes from its Tool Division of	5,000,000
In addition	
Assume Toolco is borrowing 90 million at as assumed rate of 6% to carry airplanes etc. or annually	5,400,000
It is leasing airplanes to TWA at rentals per year of approximately	20,000,000
Against these planes it can take depreciation of	12,000,000

Which produces a nominal profit of		8,000,000
Using interest as an offset to profit		5,400,000
Net Profit on Lease account		2,600,000
Income tax at 50%		1,300,000
Net profit		1,300,000

[R-3050] However, since it is not receiving in cash any of the lease rentals due to lack of Equitable's consent, the net cash drain would appear as follows:

(1) Net profit of Tool Div.		5,000,000
Less interest on Borrowings	5,400,000	
Income tax payable on profit not received	1,300,000	6,900,000
Cash drain for year		1,900,000

All this with a current minimum cash position, loaned up and 125 million of near term capital contracts to be paid for.

Assumed position of parties at interest:

Hughes Toolco Banks

The banks concerned Bank of America-Irving, appear to have belatedly recognized the seriousness of the situation and have refused to make further loans without a firm long term financing plan. It may be presumed they keep as fully informed as need be and are forcing receivership for Toolco for certainly it is insolvent. They must believe that this is the only course that will lead to a solution of a problem which has developed as a result of their complacence in granting credit with no plans for repayment.

These loans appear to be money good in liquidation comprising jet aircraft pledged, having a cost of roundly 100 million—78% of TWA stock pledged with a market value [R-3051] upwards of 70 million, or total realizable collateral value of say 150-170 million, plus a general creditor position.

Equitable Life Assurance Society Position

Equitable the chief creditor of TWA, as holder of 31 million 3¾s 1969 wrote Hughes strong letters during 1958 and 1959, expressing their concern at the lack of a financing program. They had indicated to TWA in this connection that they would be helpful in a sound program. No replies to these letters have been received to date.

On November 25, 1959, TWA paid Toolco—12 million on a note which became due as its working capital exceeded 27,000,000, which occurred at the October month end. Equitable took exception to this payment of TWA funds (even though deemed a valid demand by Toolco—according to TWA counsel) and have reserved the right to declare a default. They question also the accrual of lease rentals on jet airplanes by TWA in favor of Toolco, inasmuch as the leases have not been approved by them and again have reserved the right in this instance, also to declare a default.

In a recent meeting of Cowie, Vice President Equitable, Cook, Personal attorney of Hughes, and the writer, Cowie indicated Equitable would not be inclined to agree to any financing plan in connection with which TWA used any of its funds to pay off Toolco investment [R3052] in the jet program i.e., that this should remain in TWA as Equity support of any borrowings required.

On its face such a stand would prevent Toolco paying off its bank loans except by sale of this additional stock, some 110 million.

They are well aware of the pressure which is placed upon Toolco by its non-receipt of jet lease rentals accruing at a 20 million annual rate.

In a recent luncheon meeting of the writer with Grant Kheen, Executive Vice President, Equitable, he stated that he would not entertain the submitting of any financing program which did not carry approval of and necessary commitment by Hughes to carry through.

They recently refused to approve negotiation of lease of the unpaid for planes at Boeing on basis would only delay solution of overall problem.

Boeing certainly must be increasing its bank borrowings as a result of Toolco non payment. Their banks National City lead, Morgan Guaranty et al may counsel declaring a default—to free Boeing to sell to other customers or deal with TWA direct.

Boeing Position

Unknown—Toolco now owes them 8.2 million for 2B 331s not picked up and it is understood that there are overdue payments in excess of 1 million on spares [R-3053] delivered to TWA, for Toolco account. The 3rd airplane is scheduled for delivery about April 24.

Convair Position

Convair is eager to sell airplanes and apparently somewhat naive in dealing with Hughes.

(1) They have allowed time to take the first three of Toolco-TWA 880s off the production line in a

manner which delays Toolco's necessity of payment (and harms TWA by denying it the use of the plans for its training).

(2) They have agreed to a delaying of delivery dates from March and April to May of some 5 planes (Exact number not known).

(3) Despite the precarious financial situation of Toolco as set forth in this paper, General Dynamics president is currently discussing with Hughes the purchase of an additional block of the Convair 600 model. The number is stated nominally 20 to 40—i.e. in dollar terms $100,000,000 to $200,000,000.

Convair is slated to have a training 880 ready for delivery to TWA March 14—no funds appear available for payment.

[R-3054] One might expect this would modify General Dynamics Convair rosy view of the situation when it will be in the same situation as Boeing. Again General Dynamics—Convair, would be forced to draw on bank credits to cover non-payment—and prospect of non-payment against the balance of the contract.

Chase Bank—are the lead in General Dynamics—others are in—for example, Bankers Trust—who criticize the lack of information which has been provided about General Dynamics affairs. Chase may also counsel defaulting the contract and proceeding against Toolco.

TWA Counsel.

Chadbourne appears to be extremely concerned about TWA Management lack of diligence in making clear to Hughes the adverse effect on TWA through the lack of jet financing. They are proposing a letter to Hughes that

"TWA, An Appreciation"

Toolco give TWA an option to purchase the planes and equity support amounting to his current investment in the program and authorize TWA to work out its own problems. Chadbourne's apparent concern is the probability of successful minority stockholder action against TWA management and directors as well as Toolco—and Hughes if plane deliveries are not made on schedule due to lack of funds.

[R-3055]

TWA President's position.

The President has had talks with Blyth and Company—Specifically Donald McDonell (who is a director of General Dynamics)—concerning a plan which would finance the current jet program—plus 20 additional Convair 600s (at about 100,000,000) Blyth was asked to determine from General Dynamics the amount of subordinated debt they would take to make a plan feasible.

The plan supplied to McDonnell was Finance Department's No. 11. This plan was hurriedly put together as to the revenue side by Planning and costed out as to expenses by Finance. It is considered by the writer over optomistic as to revenues. For example—Coverdale and Colpitts would probably knock it down substantially as to revenue and profit.

Hughes is understood not to know of this TWA-Blyth talk.

Hughes

Hughes is known to be talking with Johnson, General Dynamics President about purchase of additional Convair airplanes of the 600 series.

He is known to be talking with Keath Carver about loans and getting nowhere.

He is working on a program for TWA advertising with TWA's agency—Foote, Cone and Belding. Meanwhile

"TWA, An Appreciation"

TWA had had no newspaper or magazine advertising since [R-3056] February 11. It is improbable that F.C. & B would release any advertising if so directed by TWA without Hughes approval.

C.A.B.

The C.A.B. have been complacent about the lack of financing to date.

However, default by Toolco on its contracts is bound to come to light shortly and it will be compelled to review Hughes control. If his control has worked a hardship on the company and its minority stockholders, it probably would deny his holding of stock voting rights. This would result in a new Board of Directors for TWA, made up of minority stockholders. There are no sizable blocks. Although much stock is in street names—probably not more than 10,000 shares in any individual holding. —Merrill Lynch—largest street name holder.

TWA position

From a recitation of fact and surmise concerning the magnitude of the problem and the stake and relative position of the parties at interest, what should be expected and anticipated.

(1) Toolco-TWA jointly have resources at their disposal to finance the current jet program and this without a diminution of Toolco-78% control.

(2) Despite this Hughes unwillingness to face the problem, leaves no time for a plan to be devised before the creditors move in.

[R-3057] (3) No insurance or banking group would finance TWA unless TWA were defended against Hughes in the future—that the current situations might not again occur.

(4) TWA current Board of Directors are straw men—and thus will take no action unless forced to by Counsel. Counsel in turn are forced to demand action of the Board to protect their professional standing—or failing action to resign.

(5) Toolco banks will loan Hughes no more money.

(6) Equitable will not allow a transfer of loans to Toolco over to loans to TWA in connection with jet programs.

(7) Aircraft manufacturers have major funds involved which can only be paid off through TWA operation of the planes. Finally, Toolco is insolvent and headed for early receivership. This would be caused by small vendors to Toolco upon public knowledge of his inability to pick up planes when?—within two weeks or by March 20.

Action indicated upon appointment of a receiver for Toolco and Hughes individually.

(1) Banks would immediately move to reduce collateral to possession—i.e., Leases would be denounced and Marshals ordered to seize planes, wherever they might be. This would be first step in negotiating a new lease with TWA with banks as owners of airplanes. As far as TWA is concerned at this point, Bank of America-Irving are adversaries, therefore

[R-3058] (2) TWA would immediately confer with Equitable as to advisability of appointing a receiver for TWA. This might be indicated for a short period.

(a) To defend TWA against unreasonable lease agreement with banks.

(b) To provide: a rallying point where all parties at interest could be brought together.

(3) Equitable has a poor collateral position and will probably be required to put up additional funds to work out of situation. Therefore they are the key. Possible they might put up funds and take control without receiver.

(4) TWA should, with Equitable, immediately bring together Boeing, Convair-Pratt and Whitney and General Electric.

Suggest that they all declare defaults on contracts to free them up to work out a plan of permanent financing and still retain their progress payments.

(5) TWA with Equitable should sue Toolco-Hughes for damages—implied contract default.

Sue against payment by TWA of 12,000,000 on ground this was demanded with receivership of Toolco anticipated.

(6) Plan should be based upon each party at interest taking slow motion money to extent of 50%.

[R-3059]

A possibility

Program—30 Convair—12 Boeing 331s—15 Boeing 131s —Spare Engines etc. 385 million market value—securities to be issued.

	Cash	Bank Loan	Ins. Co. New	Inc. Deb.	Equity
Banks—80 MM		61-66 unsec.	66-76	61-76	
Hold 20 planes as collateral for Toolco loan—Sell to TWA at 100 MM Cost approx. 110 MM		50		50	
Convair—30 880s 128 MM Less progress payments 28—net 100 MM	50			50	

"TWA, An Appreciation"

	Cash	Bank Loan	Ins. Co. New	Inc. Deb.	Equity
Boeing 7-331s @ 29 Less progress payments 5 net 24MM	12			12	
General Electric 58 engines 9MM	4.5			4.5	
Pratt and Whitney 20 engines 4 MM	2.0			2.0	
TWA to fund purchase of spares to be delivered	10.0				
Toolco					
Lease Rentals to date Dec. 1, 1960—note plus interest					13.0 6.4
Spares hitherto delivered to TWA					5.0
Total	78.5	50	78.5	118.5	24.4

Cash is provided from new insurance company loan of 78.5

[R-3060]

Amortization of Debt

50 Bank Loans—Ins. Co. Loans—15 yrs		Unsecured 61–66	Per A 10 MM
78.5 Insurance Co. loans	5¾%	66–76	
Unsecured Negative pledges 5–15 years			7.85 MM
27 Equitable new rate 1–8 years	5¾%	61–76	3.0 plus

"TWA, An Appreciation"

118.5 Junior Debt 2% fixed 1–15 yrs. 7.9

3% noncum. after $1 per share on stock and if working capital over 35MM

Payable only if earned and working capital over 35MM cumulative as to max. 15%

Debt Mat. Fixed	61–66	Years 66–69	70–76
Bank	10.0		
Equitable	3.0	3.0	
Ins. Cost.		7.85	7.85
Total per year	13.0	10.85	7.85
Junior Debt	7.9	7.90	7.9
Total per year	20.9	18.75	15.75

Depreciation on Irt. equip. approx 30—Piston 20 initial years.

[R-3061]

Program 30 Conv. 880s Pro forma Capitalization
15 Boeing 131s
12 " 331s
57 Total Value—385 mill.

[redacted]italization as of total issuance of debt about Sept. 30, 1960

* Equitable (3¾s) 5¾s 69	27
* Insurance Loan 5¾ 76	78.5
** Bank Loans Serial 61–66 5½%	50.0
	155.5

"TWA, An Appreciation"

Income Debentures 2% Fixed—5% max.	118.5
Equity	
At Present	117.0
New to Toolco	24.0
Total Equity	141.0
Total Capitalization	375.

Senior Debt % of Junior Debt plus Equity 60%

* Redo—secured by general mortgage
** unsecured

[R-3062]

What kind of a beating does Hughes take—

Bank Loans of	80MM
Banks sell TWA Equip.	
Banks get a TWA	
Credit worth	50
Banks—Sell Inc. Debs.	
50M @ 60	30

They are home and free and Hughes is free of 80MM bank loans.

He has lost

Convair down payment	29
Boeing " "	4
	33
Lease rentals	13.0
TWA obligation	5.8
Spares Purchases	5.0
Total	56.8
He receives in TWA stock	24.0
Net Loss	32.8

and control of TWA

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"TWA, An Appreciation"

[R-3063]

CAB

CAB

Set up meeting with CAB to explain situations from TWA's point of view—Keep Equitable informed.

Minority Stockholders

Talk with Merrill Lynch—Forrester and get them to organize a minority stockholders group—and a new Board of Directors—favorable to TWA management—Keep Equitable informed.

Above all—A party at interest meeting—venue preferably Equitable offices—Not to break up until a firm commitment.

Note A. Probable that Equitable would agree to increase participation to 50 MM or by 23 MM—if so need only 55.5 new insurance money—Let Merrill Lynch handle.

Note B—Possibly roll over 50 MM/Bank of America-Irving with a 50 MM headed by Morgan Guaranty—Mellon-Bankers Trust—Pay off Bank of America—Irving Note

Management

E.O.C.—Entirely qualified as Overall Operating Executive—In any case need capable financial officer—which exists.

[R-3064]

Notes March 11

Thomas sending to Sessel copy of his plan—envisioning financing of plus 20 600 Convair planes

"TWA An Appreciation"

It has been planned to have Keath Carver to present this to Hughes as his (Carver's) plan.

Thomas talked with Johnson, G.D. yesterday and he appeared agreeable—though hedge clausèd that he would need to talk with Convair's Johnson—has been talking with Hughes about a 30-880—30-600 plan

Hughes has said to Sessel he was devising a plan and no one else should get in act. This was for 30-30 and he would guarantee acceptance by TWA.

Link Simulator passed for acceptance by TWA and Toolco notified yesterday. This requires $375,000 payment by Toolco.

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EXHIBIT C

Affidavit of J. William Bew

[R-3065]

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF NEW YORK

Civil Action No. 61-2324

TRANS WORLD AIRLINES, INC.,

Plaintiff,

against

HOWARD R. HUGHES, HUGHES TOOL COMPANY and RAYMOND M. HOLLIDAY,

Defendants,

and

THE EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES, et al.,

Additional Defendants on Counterclaims.

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

J. WILLIAM BEW, being duly sworn, deposes and says:

I am J. William Bew, Manager, Equipment Specifications and Acceptance, of plaintiff Trans World Airlines, Inc. (TWA). I make this affidavit in opposition to defendants' motion to dismiss the complaint in the above-entitled action.

In June of 1957 I was designated as Special Representative of the Hughes Tool Company (Toolco) and stationed at the San Diego, California plant of Convair Division of

General Dynamics Corporation (Convair). My specific job was to administer the Purchase Agreement between Convair and Toolco [R-3066] for the purchase of Convair 880 aircraft as Toolco's factory representative. Throughout the period described in this affidavit I remained stationed at the Convair plant and performed the duties outlined above. Throughout the period of my employment at Convair I received my instructions from and carried out the orders of a number of persons associated with or controlled by Hughes and Toolco and Howard Hughes personally. It is my belief that Mr. Hughes personally decided all major questions of policy.

As of mid-1959, the Convair production line for 40 Convair Model 880 aircraft, 10 of which were scheduled for delivery to Delta and intermingled with those to be delivered to Toolco, was on schedule and deliveries were expected to commence in the fall of 1959.

In September 1959, the TWA test flight crew was stationed in San Diego, California, preparatory to making test and acceptance flights of Convair 880 aircraft.

Under normal production line sequence, the Convair aircraft moved from primary assembly point to final assembly point and then to the flight line. Following flights by Convair, the aircraft would be tendered for delivery, contemplating final inspection and test flights by the customer.

The production line sequence was that subs or subassemblies flowed toward the line where they were mated in this order: wing halves mated, overwing barrel section, forward [R-3067] fuselage section, aft fuselage section, engines and pylons, empenage or tail section, then finally to where interior and paint were applied. The ship then moved out of the hangar to be weighed, systems checked

out, taxi test, production flight test, FAA ticket, tender of delivery, customer inspection, pre-flight and acceptance flights.

On June 9, 1959, I advised TWA by teletype that Convair's production line was on schedule and that aircraft would proceed to Field Operations as scheduled. However, I also advised that Convair had, in my opinion, already used up the cushion time factor planned for development modifications.

On July 30, 1959 inspectors employed by Toolco arrived at the scene and observed the progress of various aircraft.

On August 6, 1959, the Toolco inspectors began to show a particular interest in aircraft Nos. 5 and 6.

During this period there were approximately 15 aircraft on the floor of the Convair plant. Thus, aircraft No. 15 had reached the stage of production whereby wing and overwing barrel had been mated.

The first four aircraft (Nos. 1-4) were to be placed in a test program to enable the necessary certification by the FAA. Hence, it was assumed that Toolco aircraft Nos. 1, 2 and 3 would be worked into the delivery schedule at a later date. Aircraft No. 4 was to be delivered to Delta.

[R-3068] Aircraft Nos. 5 and 6 were scheduled for delivery as Toolco aircraft in November and December 1959 while Nos. 8, 9 and 10 were scheduled for delivery in January and February 1960. Aircraft No. 7 was scheduled for delivery to Delta in January 1960.

These delivery schedules had been set forth in Amendment No. 1 to the original Purchase Contract. This Amendment was to schedule deliveries as between Toolco and Delta. It apparently was not signed by Toolco although a related amendment was signed by Delta.

On October 5, 1959, Toolco placed aircraft No. 5 under guard.

Affidavit of J. William Bew

On October 11, 1959, I was directed not to ever indicate any final acceptance of any aircraft.

On October 12, 1959, I advised TWA that aircraft No. 5 remained unmoved from the weighing scales where it had been placed on October 9th. Convair refused to work on the aircraft while it was in this location and on Mr. Hughes' orders the Toolco inspectors did not allow it to be moved.

Before aircraft No. 6 was placed under Toolco guard, a new prototype seat was installed by Convair. Later, after Toolco guards took control of the plane neither Convair nor TWA were able to board the aircraft for any purpose, including the removal of the prototype seat. Hence, continued development and production was stalled. Despite repeated requests of Toolco representatives, Convair was unable to remove the prototype seat and another prototype had to be developed.

[R-3069] In December, 1959, Toolco guards at the Convair San Diego plant took control of aircraft Nos. 5, 6 and 8, placed ropes around such aircraft, and all work on such aircraft stopped. It was anticipated that these planes would be the first tendered to Toolco for delivery.

On December 7, 1959, I advised TWA that these aircraft had been taken over by Toolco guards and that neither TWA nor Convair personnel could get aboard them. As a result of the placing of guards and ropes around these planes, my department was unable to board them. Hence, TWA was unable to finish its necessary inspections and Convair could not complete the outstanding work.

Throughout January 1960, I was directed to ask that Convair advise me of all contemplated demonstration flights on 880 aircraft. In addition, I was directed to tighten up control over the use of flight test aircraft.

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On January 31, 1960, aircraft No. 7 was delivered to Delta Airlines.

In February, 1960, Hughes caused aircraft Nos. 5, 6 and 8 to be placed in bailment, thus removing them from Convair control. Aircraft No. 9 was placed under the control of Toolco guards so that no further work could be performed on it by Convair or inspections made by TWA. Aircraft No. 9 was subsequently bailed and all these aircraft were towed away from the Convair plant.

[R-3070] On February 12, 1960, I received instructions from Mr. Gay, an associate of Mr. Hughes, that only authorized and necessary personnel should be allowed on board the flight test aircraft. This direction was extremely difficult to accomplish and Convair stated that curtailment of demonstration flights would make it difficult for them to promote sales. It should be noted that the rebate proviso to the Original Purchase Agreement provided that each additional sale of an 880 aircraft or models derived therefrom would operate to lower the price of the Toolco 880's.

On February 15, 1960, representatives of American Airlines and Braniff Airways requested a ride on No. 5 aircraft. Our general directive to Convair was that all such requests should be refused and I understood from Mr. Owens, another Toolco representative, that this request was refused.

On February 22, 1960, I was instructed to place an agent on guard at each aircraft which might be used for flight to prevent the demonstration of any such aircraft to would-be purchasers.

By this time Hughes had assumed direct control of all early deliveries and put them under guard.

On February 22 and 23, 1960, TWA's representatives at Convair were ordered to refrain from participating in

any discussions with Convair or any one else in regard to delivery schedules.

[R-3071] On March 1, 1960, I advised Mr. Price, the chief Toolco representative and also Mr. Gay that action should be taken to preserve the engines on aircraft Nos. 6 and 8. No action was taken, and at least as to No. 6, the engines became corroded. The Toolco guards would not even allow General Electric employees to take care of the engines.

Throughout the month of March, 1960, and continuing thereafter, Toolco personnel made a sustained effort to stop demonstration flights of Convair 880 aircraft.

In March, 1960, aircraft Nos. 13, 14, 15, 18 and 19, being the next Toolco aircraft in production (Nos. 16 and 17 being for Delta), were pulled out of production and stored on the Convair flight line.

Aircraft No. 5 was to be used for testing purposes and as part of Convair's FAA air worthiness certificate procedures. Under the bailment agreement it was to be returned to Convair in March. It was not redelivered by Toolco until September 13, 1960.

In March, 1960 Toolco obtained a change in the scheduled delivery dates by Amendment No. 4 to the agreement between Toolco and Convair. This provided that deliveries should not commence until May, 1960.

In May, 1960, Convair received the FAA air worthiness certificate by use of such aircraft as still remained within [R-3072] its control. Aircraft No. 10 was delivered to TWA as a training aircraft on May 18. An agreement providing for the assignment of 20 Convair 880's to TWA was not confirmed by Hughes and Hughes continued to exercise control over all 880 aircraft on order by Toolco.

Aircraft Nos. 11 and 16 were delivered to Delta on May 4 and on May 6th respectively.

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The Assignment Agreement purported to assign to TWA aircraft Nos. 8, 20 and 22. These aircraft were subsequently delivered to Northeast Airlines.

On June 6, 1960, I was advised by Mr. Rummel, another Special Representative of Toolco, that no tests were to be made on Toolco's aircraft either by Convair or by TWA.

In June 1960, aircraft No. 20 was flown by TWA. Such flights were stopped by Toolco. Aircraft No. 20 was then stored.

Aircraft No. 17 was delivered to Delta on June 2, 1960. The status of aircraft as of this time was as follows: Nos. 24, 12 and 25 had been flown by Convair, No. 22 was in Field Operations being prepared for flight and Nos. 26 and 27 had been moved out of the hangar and system checks were being conducted.

During July and August work on Toolco aircraft was slowed down. Convair began taking weekends off. At TWA's insistence Convair conducted engine modifications, dropping engines [R-3073] for up-dating, fuel consumption flight tests, and single hydraulic system flap operation. In general, TWA attempted to have Convair up-date the aircraft.

Following the withdrawal of Mr. Thomas as President of TWA, the morale at Convair hit rock bottom. Shortly thereafter Hughes arrived personally and flew aircraft Nos. 3 and 26. Hughes gave instructions that no further acceptance flights should be flown except as he directed. He wished to be present when all such acceptance flights were made.

During this period aircraft Nos. 12, 22, 23, 25, 26 and 27 were tendered by Convair for acceptance flights. Following the refusal by Toolco to allow such flights these

aircraft were stored making a total of 12 aircraft in storage in various stages of completion.

Aircraft Nos. 21 and 29 were delivered to Delta on July 5 and August 5, respectively.

During September and October of 1960, Convair tendered aircraft Nos. 28 and 30 for acceptance flights and upon refusal such aircraft were placed in storage. Convair ceased work on all aircraft on order by Toolco and began a substantial layoff of personnel. Aircraft Nos. 33, 34, 35 and 39 were pulled off the production line in October, 1960 and work stopped.

Aircraft Nos. 36 and 38 were delivered to Delta on October 1, and October 10, respectively.

[R-3074]

The four bailed aircraft were finally returned from bailment by October 21, 1960.

Had Amendment No. 1 to the original Purchase Contract been adhered to all thirty aircraft would have been delivered to Toolco by the end of September, 1960.

In November of 1960 Mr. Raymond Cook came to California and entered discussions with Mr. Digges of Convair which resulted in the reduction of Toolco's order of 880 aircraft from 30 to 24, thus making possible the Convair lease of Nos. 5, 8, 12, 20, 22 and 23 to Northeast Airlines and the firm order by Toolco of 6 Convair 990 aircraft in American Airlines configuration. Mr. Cook designated the aircraft which Northeast was to acquire. These aircraft were delivered to Northeast between November 1960 and January 28, 1961.

In December of 1960 Toolco assigned 19 Model 880 aircraft to TWA, one 880 aircraft having been previously purchased by TWA with its own funds in May of 1960. Of the 19 aircraft assigned only 16 had been designated

by number and the remaining three were designated in 1961 out of the seven 880 aircraft still on order by Toolco.

Deliveries of Convair 880 aircraft to TWA commenced in January 1961 and were completed on October 13, 1961.

During the period outlined above I was aware that Convair was putting into production numbers of Model 22 M and 600 (990) jet aircraft. Although I was aware of some interest [R-3075] on the part of Mr. Hughes in regard to these aircraft, I received strict instructions not to inspect, discuss or even recognize the fact that they were on the production line.

J. WILLIAM BEW
J. William Bew

(Sworn to on January 31, 1963.)

EXCERPTS FROM THE TESTIMONY OF R. W. RUMMEL

[Testimony—September 13, 1962]

[R-12,870] Q. Martin, we haven't mentioned Martin. What was the status of Martin in this picture? A. At that particular time, as I recall it, practically nothing.

Q. What I am trying to get you to do is to identify, if you can, any other manufacturer or potential manufacturer of commercial aircraft that could have been contacted. A. That could have been?

Q. Yes. Would you add any others to this list? A. That's a tough question, because at the moment I don't remember all the manufacturers that existed, and what each of them might have been able to produce had they been approached. There might have been some abroad, there might have been some somewhere else. I don't know. When you say "could have"—

Q. Were you ever told, was it ever suggested to you by anyone, that you should not approach anyone to explore the possibilities of their having a useful product? A. Well, yes, I have been, but not at this particular time, as I recall it.

Q. Will you identify the time, then, when you were? A. Well, not precisely, but it was essentially later on, I was asked not to approach various manufacturers at times in different areas, sometimes on the basis it wasn't [R-12,871] timely, sometimes on the basis of simply that this wasn't to be done. I realize that isn't very specific.

Q. Can you be specific? A. Yes. I was asked not to do much with Douglas during the jet period, early jet development, on the basis that we couldn't get with them anyway.

Excerpts from the Testimony of R. W. Rummel

Q. On the what? A. Basis that we really couldn't get with them anyway. There were times I was asked not to work with Lockheed in certain specific areas. I believe I was told at one time not to work with Boeing on the jets. That was likely in the 1953-1954 period. I was definitely asked not to work with Convair on the 990.

That's all I seem—that comes to mind.

Q. All those instances related to the so-called development of jet aircraft or jet age? How would you describe this period?

Mr. Williams: Before we pass to any other question, I will ask the Special Master if he will ask counsel to fix—when he says he was asked—to fix the person, the time and place of such conversations.

Mr. Davis: May I do so in my way?

Mr. Williams: I think this is the time to do it. The witness has said he was asked to do some-[R-12,872] thing. I want to know who it was.

Mr. Davis: May I do it my way?

Mr. Williams: I think there comes a time—

The Special Master: I think he is entitled to have it developed as a part of this examination.

Mr. Davis: I intend to.

The Special Master: You may do it in your own way.

Mr. Davis: Thank you.

Mr. Williams: As long as we have it fixed before we pass—

Q. First may I have an identification of the time period, if there is one, during which these so-called requests not to contact certain manufacturers were made.

Excerpts from the Testimony of R. W. Rummel

Let's talk of Douglas first, if you can't put them all into one period. When was it? A. This would have to be an approximation. This would be—it would have been, I think, probably 1955, possibly 1954, right in that period of time, when Douglas was moving forward with the development of the DC-8. This was mentioned a number of times, I might say.

Q. During this period 1955, or was it a continuing period? A. Well, a continuing period, but I can't be precise. [R-12,873] Substantially my impression is it lasted up through the time we committed to Convair.

Q. "We committed to Convair"— A. "We" here, I meant to say the Hughes Tool Company.

Q. With respect to what? A. The Convair 880.

Q. You don't happen to have the date when Hughes Tool committed to Convair with respect to the 880? A. I think it was September 1956, but I don't know for sure.

Q. With respect to the period relating to Lockheed, can you give me the time period? A. Well, there was a time during the development of the Electra that I was requested not to talk to Lockheed or deal with them on the Electra.

Q. I am not sure that I understand your answer. I hear words, but I don't get the full sense.

Mr. Davis: May I have the answer read to me, because I don't understand it.

The Witness: I was trying to fix the time of the Electra development in my mind so I could fix the time more fully.

The Special Master: Read the answer.

(The answer was read.)

Excerpts from the Testimony of R. W. Rummel

[R-12,874] Q. I don't understand what you mean by during this time of the development of the Electra. Are you talking about the development of the Electra as an aircraft, or are you talking about the development of discussions relating to the Electra? A. No, development of the airplane.

Q. What was the period of the development of the airplane? A. I think my best recollection is already in the testimony. I think it was during 1955, as I recall it.

Q. My recollection is that you testified that you were requested not to work with Boeing on jets during 1953 and 1954. Is that correct? A. Yes.

Q. That is still your testimony? A. Yes.

Q. The period when you were requested not to work with Convair on the 990s, when was it? A. Well, I had absolutely nothing to do with the 990 with respect to the Hughes Tool activities, and I was requested not to become involved in the 990 affairs, not only once, but it was repeated a number of times. This would have been during, I believe, late 1959 and in 1960.

Q. This was late 1959, early 1960? [R-12,875] A. That is my best recollection, yes.

Q. During that period were you involved with Convair with respect to the 880? A. Yes.

Q. The earliest time that you have identified, according to my notes, was in 1953 or 1954 with respect to Boeing on jets.

Will you describe now the circumstances and who and how you were asked or requested not to work with Boeing on jets? A. This was in a phone call with Mr. Hughes, and he advised that I should not move forward with

discussions at Boeing with the jets. At that time we had contemplated a few meetings which were aimed toward establishing some rights to early Boeing production, and as I recall it, Mr. Hughes admonished me to leave that situation alone, that that would be handled in due time, or words to that effect.

Q. Let me see if I understand that.

When you say "we," you are referring to TWA was seeking to establish some rights with Boeing with respect to delivery, is that your testimony? A. I would say so. There was one meeting participated in by Mr. Damon and myself in San Francisco, with Wellwood Beal and some other Boeing people, at which time I thought [R-12,876] Boeing had agreed to such rights, but it developed later that they had not. I think this conversation with Hughes was subsequent to that meeting.

Q. It is not clear to me what rights you were discussing with Boeing in 1953-54. A. It would have been, had we succeeded, tantamount to a verbal understanding, if you like, on rights of first refusal.

Q. Rights of first refusal to what? A. To early delivery positions.

Q. With respect to what? A. Jets.

Q. Can you identify the jets that you were then talking about? [R-12,877] A. We were talking about Boeing's initial production of commercial jet aircraft. The airplane they finally produced was considerably different than the one they envisioned at that time.

Q. When did those discussions with Boeing first begin with respect to these Boeing jets? A. I can't be certain.

Excerpts from the Testimony of R. W. Rummel

Q. Who was the officer or person who was conducting those discussions with Boeing? A. The Boeing technical team had the practice of approaching a number of airlines, TWA was one of them, to review with those airlines the preliminary decisions that they were working out. There was no set schedule for this. When they had a design they wanted to discuss they would make arrangements to do it. There were a number of such meetings on various jet designs that Boeing was considering.

These were arranged through me because this was my function in TWA, insofar as meeting with the TWA group was concerned.

Q. Do you recall when it was that this Boeing team came to you in order to arrange a meeting with TWA people? A. There were a number of such meetings, Mr. Davis, and I have the impression that they covered, oh, a period fairly immediately following the B-47 development on up [R-12,878] to the time the commercial airplanes were finally built.

Q. Did you arrange for such meetings that Boeing was requesting of you? A. We would accommodate Boeing when we reasonably could, yes.

Q. I am trying to get you to describe for us what happened. I get a picture that the Boeing team was contacting various airlines, including TWA, and they came to you or your department, and I would like you to describe for us now what happened, what meetings did you set up, with whom, who was present, and who— A. Well, it would normally be my immediate group. Of course, when instructed not to meet or to work with manufacturers, I usually did not.

Excerpts from the Testimony of R. W. Rummel

The character of most of the meetings would very simply be that a small Boeing team, possibly two men, on up to three or four, would meet with myself and really others as appropriate. Sometimes there would be two or three other people. Once in a while, if they wanted to talk flying characteristics, we would have a representative from the Flight Department in. These meetings, in those days, had to do primarily with configuration, operating—claims on operating economics, performance aspects, and were put forward by Boeing not as proposals, but as explorations [R-12,879] into what they might be able to build if it was good enough, and they were seeking the reaction of prospective customers to see whether what they had met a reasonable market response.

Q. At that time—I am talking now about the initial contacts by Boeing—what were they discussing or offering? Did that have a type number, identification of the aircraft, or was it still all on paper? A. If it did, I wouldn't recall it.

Q. How can we identify whatever they were talking about when they first contacted you? A. I suppose Boeing have better records than anyone else. I can recall but very vaguely some of these early configurations going through a series—the airplane designs went through a series of changes very marked in nature.

They explored a number of possibilities. These explorations included frequently wind tunnel tests and other preliminary work that Boeing saw fit to do in order to determine whether or not the airplanes they were proposing were suitable.

Q. But I am trying to identify the airplane they were then proposing as distinguished from, as I understand

your testimony, what subsequently came out. You were not discussing the 131 or 331 jet aircraft at that time, were [R-12,880] you? A. No.

Q. I am trying to get you to use a word so I can refer to what you were talking about. A. I don't recall them that well. I can recall vaguely configurations, but I don't recall specific model designations or the specific designs at the moment.

Q. Were they talking about the possibility of converting what had been developed as a military aircraft into a possible commercial aircraft, is that what was taking place? A. I don't recall Boeing proposing that. At one time Mr. Hughes proposed mounting a commercial fusilage on a B-25 wing. I don't recall Boeing proposing converting military ships into commercial use directly, except to the extent that one might call the commercial 131 a derivative development o the military tanker.

Q. What I am trying to understand, Mr. Rummel, at this point is what it is that Boeing was presenting to these various airlines, including TWA, in 1953 or 1954. A. The drawings of jet airplanes.

Q. That was— A. And brief performance data together with them.

Q. Did that occasion you to make some economic studies [R-12,881] based upon the data that these technical people from Boeing presented to you? A. We would do this on occasion, yes. My memory is not that good, I am sorry to say, as to—

Q. I am trying to understand if there came a point where you made a recommendation to the top management people at TWA with respect to this approach that was made to you by Boeing. A. Well, I was confident that the jets when finally produced would be a major step forward

in air transportation, and I was eager for TWA to be in a position of taking full advantage of that on a fully competitive basis, and preferably obtain a position of leadership. I undoubtedly made comments to my boss in TWA—

Q. Who was that at that time? A. (Continuing)—trying to keep him advised at that time of significant developments. John Collings.

Q. As a result of that was this subject taken up by Mr. Damon or Mr. Collings, or something comparable to this equipment commitment, to encourage you to pursue those studies?

I am trying to get you to tell us what was the development of this or these approaches made to you by Boeing at that time, in 1953 and 1954. [R-12,882] A. Well, during this period of time there were discussions also with Mr. Hughes from time to time, depending on Mr. Hughes' convenience and interest, and one thing and another.

Q. That I understand. Discussions which you had with Mr. Hughes? A. Yes.

Q. Do you know anybody else who had discussions with Mr. Hughes on this same subject, the Boeing proposals? A. These discussions with Hughes weren't necessarily limited to the Boeing proposals as such. It was more of a state of the art, I would say, kind of discussion.

But during this period 1953, 1954, 1955, I really can't be certain whether Hughes had discussions with others in TWA or not on this.

Q. Without being certain about it, were you ever told by anyone, did you ever hear of his having discussions with anyone else? A. I just couldn't be definite this far from the scene. I don't recall any. I admit it is certainly not impossible.

Excerpts from the Testimony of R. W. Rummel

Q. My question to you before you introduced Mr. Hughes' name was what you did with top management at TWA with respect to these proposals or approaches made to you by Boeing, if any took place. [R-12,883] A. Well, I kept them advised. I must say that I never felt I had a corner on the market with respect to contacts with the manufacturer.

In other words, the manufacturers undoubtedly were in touch also, to some extent, with Mr. Damon, and I assume Mr. Collings.

Q. Do you know that Boeing was also talking to Mr. Damon and Mr. Collings at the same time they were talking to you? A. I know that there was a discussion either with Beal or Allen prior to the San Francisco meeting, but I don't know the particularity.

Q. What I am interested in is what you did or what meetings you know of with Mr. Damon or Mr. Collings or anyone else in TWA relative to these approaches or suggestions from Boeing as to a jet program or whatever was taking place. Can you tell us that? A. There was a meeting at the Town House in Los Angeles which I attended. I remember quite clearly Wellwood Beal of Boeing was there.

Q. Who else? A. There were a number of TWA people and Boeing people, but I can't for the life of me at the moment recall who they were.

[R-12,884] Q. What was the subject under discussion? A. Talking about future airplane developments.

Q. By Boeing? A. Oh, yes. Yes, Boeing.

Q. During this period, 1953-54, that you are referring to, did there come a time when, based upon your recommendation or someone else's recommendation, Mr. Damon or your boss, Mr. Collings, indicated an interest in the

aircraft being proposed by Boeing? A. Well, I certainly had the impression that both of these men were interested in knowing of any significant technical developments that might affect our future operations to a noble extent. I always tried to keep them generally advised.

Q. Did you have occasion of making any reports to either Mr. Damon or Mr. Collings or anyone else at TWA as to the result of your studies based upon your drawings or whatever Boeing presented to you at that time, 1953-54? A. I had a general practice of reporting what I thought were significant developments. It might have been brief letter reports or reports or letters, or it might have been verbal. I, as I say, tried to keep these people advised of significant developments, as I did Hughes, when I had the occasion to.

[R-12,885] Q. Can you tell me what the nature or substance of these reports was, based upon these preliminary approaches to you by Boeing? A. Not really, without—no, I couldn't tell you.

Q. No idea at all? A. Well, we are talking about a span of time here, and a series of events, and I don't know how to be any more specific than I have been, Mr. Davis.

Q. I am trying to get you to describe the series of events which took place following these approaches made to you by this time from Boeing relating to whatever they were proposing, which I understand now to have been some jet aircraft on a drawing board when they approached you and other airlines to discuss some of the varying operating aspects of the aircraft.

Mr. Williams: Mr. Rankin, I think the witness' confusion, difficulty in answering the question, may arise from the fact that I think he has testified

that there were a series of proposals, and he can't detail those.

So when you ask for a sequence of events, all he can say is there were a series of successive proposals.

Mr. Davis: I think this witness, on the basis of [R-12,886] of his prior testimony, is capable of picking up any events, starting with an approach by Boeing, and telling us what took place. I am not trying to get him in detail to tell us what took place at each meeting, but certainly he is capable to describe the developments or the sequence of events which followed from the time when he was approached by Boeing with proposals based on what they had on the drawing board.

Mr. Williams: I am not trying to stop you. If he can do it—

Mr. Davis: If he can't do it, in light of what he has previously testified, I will be very surprised.

The Special Master: Are you trying to reach whether he reached a favorable recommendation, or an unfavorable recommendation?

Mr. Davis: If he came to the point of making a recommendation.

What I am trying to do is to get this witness, which he has done any number of times without any difficulty in comparable areas, to describe the development or the introduction of discussions with Boeing with respect to jet aircraft, and if, in the course of it, as a result of his studies, he made [R-12,887] recommendations, let him tell us what happened.

Mr. Williams: Do you understand the question, what he is driving at?

Excerpts from the Testimony of R. W. Rummel

The Witness: I understand it, but it will be a very vague answer.

Mr. Williams: It will be a vague answer?

The Witness: Well, yes.

Mr. Davis: Make it as specific as you can, Mr. Rummel.

Mr. Williams: Do the best you can.

A. Well, the first meeting I recall with Boeing, when I discussed possibilities of commercial jets, was with Ed Wells in Wichita. I believe either shortly before or about the time the B-47 was produced.

Q. The C-47, you say? A. B-47. The occasion of the visit was to inspect a small twin-engine airplane mockup that Boeing at one time considered building in Wichita. This had piston engines.

Q. Piston? A. Piston. This goes back long before the period we are speaking of.

I might say that there was a number of explorations into jet possibilities from approximately late 1948 [R-12,888] on.

Q. With Boeing? A. No. I don't recall any with Boeing at that time.

The nature of this particular meeting, it was a private discussion between Ed Wells and myself, Ed pointed out the advantage of externally slung engines, problems they were then having with swept wing design, and that he felt considerable work had yet to be done in advancing the state of the art before a commercial airplane could reasonably emerge, but that Boeing intended to follow this closely, and push the state in areas where they could, and certainly gave me the impression of wanting in, so to speak, on the commercial business later on.

Excerpts from the Testimony of R. W. Rummel

The meetings I referred to a while ago were exactly what I said. Boeing would show up with preview drawings or brief reports, saying "We have looked at this," or "We have looked at that. What do you think of it?"

In one case they had a four-engine airplane with two nacelles, each nacelle containing, obviously, two engines.

I opposed this concept for several reasons. One, I didn't think it would represent a good maintenance installation because of difficulty of access to the engine, I felt it was quite possible that in case of compressor [R-12,889] blade failure one engine would spit the blade forward only to be swallowed by the adjacent engine, causing a multiple failure, and for other considerations.

Boeing, at their next presentation, came back with a design that had four nacelles. This is what they finally built.

I don't recall the specifics. We would look at the wing area, the performance, we would see if, in a preliminary way, it looked like the airplane would fit airports, and I might say most of the manufacturers were prone, in our view, to be highly optimistic about airport developments, we were prone to want to be somewhat conservative, and buy airplanes that we felt would in fact fit our airports, not to be too speculative in this area, manufacturers were prone to build airplanes that landed at higher and higher speeds.

Each succeeding model would have a higher landing speed, generally speaking. This was a perpetual fight. We would always try to have the airplanes configurated to hold the speeds down within reason. They were prone somewhat, generally speaking now, to be optimistic, in our view, about the operating economics of the airplanes. We tried to bring that down to earth.

Excerpts from the Testimony of R. W. Rummel

Well, the general nature of the discussions in the [R-12,890] meetings I mentioned with Boeing was to review these facets, sometimes conversationally, using their data, charts, sometimes we would make some calculations of our own, it all depended on the circumstances, and then give them the reasonable benefit of our thinking or our requirements.

As I say, they did this with a number of people, and then finally would combine it into a new later proposal. These proposals were not proposals in the sense that they were trying to then sell the airplane. They were simply trying to develop a future product, and wanted to include their prospective customers to the degree that they felt reasonable in the development of the concept in the product.

Q. Are you now describing something that took place in connection with piston engines with Boeing, or are you now describing what in fact took place when Boeing approached TWA in the 1953 era? A. I was describing what took place during the early jet development phases in very general terms and as a general thing with Boeing.

[R-12,891] Mr. Williams: Mr. Special Master, I would like to interrupt the examination now to revert to an objection which I made earlier.

We seem to be on the development of various types of Boeing airplanes. Counsel had asked the witness whether he had ever been told not to approach various manufacturers. The witness answered yes. He was then asked to be specific.

He specified that he had been asked not to do much with Douglas, not to work with Lockheed in specific areas, he was told not to work with Boeing on jets, 1953 and 1954 period, he was definitely

asked not to work with Convair on the 990s. This was repeated a number of times.

I asked at that time that counsel be specific as to who had asked him not to do it. Counsel proceeded to fix a period of time with respect to Boeing, and then elicited from the witness the answer that he had a phone call from Mr. Hughes.

We have not yet had an answer as to who asked him or who made the requests with respect to these other companies, and I don't want the record to go on for so long without a definition of who made this request.

The Special Master: I think you are entitled to [R-12,892] have it. I thought the witness was going to get to it, but I have some doubts myself, and I would like to not leave this session without having that in the record as to each of these occasions.

Mr. Davis: Mr. Special Master, may I point out that counsel for TWA and other counsel here will have a full opportunity to cross-examine this witness.

I respectfully submit that I am entitled to develop the facts, it is my discovery proceeding, as I want to.

I told counsel that I did intend to develop that. I think the discovery proceedings which I have been conducting clearly indicate that I have gone to great pains to avoid leaving anything unclear.

I have been trying to develop the circumstances in which we want to understand this telephone conversation adverted to by the witness took place, because I have no intention of getting a record so

confused or confusing, as counsel is obviously trying to do, pick an answer out of context.

What I have been trying to do for the last 15 minutes with this witness, to whom it may have been suggested that it would be desirable to introduce the name of Mr. Hughes at the first opportunity, I have [R-12,893] been trying to develop what happened in connection with this approach by Boeing relating to this jet program so that we could take this telephone conversation to which he adverted in context, but whether I do it in a manner which is satisfactory or pleasing to either Mr. Williams or other counsel here, or, may I suggest, even to the Court, at this state of the proceedings, I am entitled to my discovery proceedings as I think is best designed to develop the facts in a manner which I can understand. It is my effort to discover the facts, and if at any time, when the appropriate time comes, these gentlemen think that they can develop some further facts which they would like to memorialize in this record, they may do so.

I certainly don't understand what has been going on today more so than some other times, objections from counsel for the additional defendants as to the form of the question. They are entitled to put me on notice that they object to the form so that I may not be misled, should I fail to correct the form of my question, should the time come when I want to use this testimony at a trial. There is no objection from counsel for the witness.

Now I suddenly find that Mr. Williams is very [R-12,894] much interested in developing some facts

from this witness. I have no objection to a full development of the facts. I intend to do it. I am sure that they will have an opportunity to do it. He is their witness. They must know the facts.

If they want to know the answer to the question they have all evening and all the time to discuss it with him.

In this connection, may I point out, Mr. Special Master, that if I understood this witness' testimony just before the luncheon recess he was back from Europe last Thursday, and we were told he would not be available until Tuesday of this week, and I think that is a matter that ought to be inquired into, because I recall very clearly that we were told that a cablegram had been received from Mr. Rummel, if my memory serves me, that he would return to this country on Monday sometime, and would not be available until Tuesday, and now I believe that we have a record indicating that this witness was back since last Thursday.

Mr. Williams: Let's stop right here on that point, because I have a telegram saying the witness would be here on Monday, and that was a cablegram received from London.

[R-12,895] He came back, apparently to Vermont, on Thursday, unbeknownst to us, but his cablegram said he would be here on Monday, and I reported that to the Court.

Let's not be diverted from the objection which I raised, that when you elicit from a witness an answer with respect to a conversation we are entitled, no matter what your purpose, or what you want to do, or how clever you may be, to have the name of the participants in that conversation.

Excerpts from the Testimony of R. W. Rummel

I would like to ask, Mr. Special Master, that the witness and counsel be required to state who it was who asked him not to get in touch with these various airplane manufacturers.

The Special Master: I will sustain the objection, and direct that at this point the inquiry be made as to who made this instruction each time, and then I will give you a full opportunity to develop every situation to the fullest extent so that there could be no misunderstanding about the context in which it was given and any surrounding explanation or reasons for the direction.

Mr. Davis: Mr. Special Master, I, for the record, want to state that I believe it to be my right to conduct this discovery as I see fit.

[R-12,896] I have no objection to interrupting my discovery to allow either the Special Master or Mr. Williams to ask this witness any questions as to any area as to which he has already testified.

The Special Master: I will interrupt it myself, and I will ask the witness to state on each of these occasions that he described who gave him such directions as he has described and when. Take them one at a time.

The Witness: The initial instructions on the 990 were through the Hughes Tool Company representatives. This was repeated later on by Mr. Hughes in a phone conversation to me, that is, that I should not have anything to do with the 990.

The Special Master: Did he give any reason for that instruction at the time?

Mr. Davis: I don't believe we have on the record what the instruction was yet, do we?

Excerpts from the Testimony of R. W. Rummel

The Special Master: Tell what the instruction was.

The Witness: The intructions were that I should not participate or allow the participation in either contract or specification development activities, that we should not inspect any 990 parts or components at [R-12,897] the Convair facility, and that we should not discuss the 990 with Convair.

The Special Master: Was any explanation given to you at that time as to why you should not have such discussions?

The Witness: Well, Mr. Hughes generally wasn't in the habit of explaining detail or reasons for instructions. The impression I had was that he preferred to either work himself on the 990 or have Tool Company representatives do it. It was clear that I was not to.

The Special Master: Did you understand from him there was some reason that you personally should not do it?

The Witness: Well, if it was a personal reason, I don't think I understood it.

The Special Master: You didn't understand that it was something involving your own personality in the contact that you might make?

The Witness: My personality?

The Special Master: Yes.

The Witness: No, I certainly didn't so understand it.

The Special Master: You just understood that he was instructing you not to get involved in the 990?

[R-12,898] The Witness: That's right.

Excerpts from the Testimony of R. W. Rummel

The Special Master: Did you understand that that included all the TWA people, that instruction?

The Witness: Yes. Well, it included all the TWA people that I had any jurisdiction over.

The Special Master: And there was no further explanation than you have given?

The Witness: Not that I can recall. I say, the impression I had was that these were areas in which he preferred to work himself, or have others work, rather than have me work in the areas.

The Special Master: By that—

The Witness: By that I mean TWA in this case, or as a representative of Hughes Tool Company, either one.

The Special Master: He thought someone other than TWA people might do it more effectively?

The Witness: I can't say that was either stated or inferred, Mr. Special Master. It simply was that he did not want me to work in this area.

The Special Master: What was the next time that he instructed you not to work with some manufacturer?

The Witness: This also was a phone conversation. I can't be real specific on the time, but it had to [R-12,899] do with the Lockheed Electra. Let's take the Lockheed Electra as the next one that I mentioned earlier. The impression that I had then was that he was working with Bob Gross and possibly others giving consideration to possibilities of procuring the Electra, and that it simply wasn't timely for any activities on my part. I got the impression that rather than having the issue confused that I should not do anything but bide my time.

Excerpts from the Testimony of R. W. Rummel

The Special Master: What was the next instruction?

The Witness: These are not really in sequence. The conversation relating to Boeing was that he did not want any promotional work done at Boeing, by that I mean he didn't want TWA to influence the Boeing design to make it a better design, he didn't want anything done on deliveries, and I got the impression, and I can't again, recall it word for word, but I recall having the impression that he felt this was a premature effort, until he had time to give it further thought, presumably, and I say "presumably" advisedly, in consultation with me and others, I am sure he talked with many people on airplanes, until such time as it appeared that we could center our attention on a [R-12,900] product which would permit us to take a lead, and this might or might not at this time turn out to be the Boeing.

The Special Master: I get the impression from what you say that you understood that he was asking you not to do more with Boeing with the idea that he did not want you to help develop an airplane that would not be fully satisfactory for TWA purposes, and wished to wait until you had worked out the state of the art to such an extent that you could have the best plane possible. Is that what you are saying?

The Witness: Well, partially. We had had a number of cases previous to that time wherein TWA's negotiation effort had produced airplane improvements which TWA did not finally avail itself of, but the competition did.

Excerpts from the Testimony of R. W. Rummel

The Special Master: You really helped your competitor, then, in those efforts?

The Witness: Well, this, I think, was a general thing that he was trying to avoid. I don't recall whether or not this specific thing was stated in the conversation or referred to, but I understood his feelings on this, in fact I shared it to a great extent. We had, in the past, done a number of things, and [R-12,901] developed airplanes in negotiating efforts which we didn't finally buy. The DC-6B, for example, which I mentioned yesterday, was one of them. I don't say it wouldn't finally be developed, but that is what developed.

The Special Master: What is the next instruction that you recall? Did you mention something about Douglas during your testimony?

The Witness: Yes. I would say Douglas might have been more a discussed understanding between us than a specific instruction as such, but it took the effect to be the same.

The Special Master: What do you mean by a discussed understanding? You must have had some communication.

The Witness: Yes. I had numbers of phone conversations with Mr. Hughes on various jet airplane developments as I had understood them. The Douglas situation was not particularly a happy one at this time.

The Special Master: Did you discuss that with Mr. Hughes, the fact that it was not a happy situation with Douglas and TWA at that time?

The Witness: Yes. As I recall it, I did discuss that. The unhappiness, if you like, was not so

much between TWA and Douglas as it was between Douglas and [R-12,902] its thoughts concerning its prospects for dealing with Mr. Hughes.

The Special Master: I see.

The Witness: It seemed to have the conviction that it could never complete a deal with Mr. Hughes.

The Special Master: Did Mr. Hughes say anything to you about that in this instruction, about whether there was a possibility of making a deal?

The Witness: I really can't recall the discussion quite that clearly. The net result I do, which was that we would let Douglas go their way, and if there were to be any contacts with Douglas, that Douglas would have to contact him first. It was that kind of a situation.

The Special Master: Had that continued for some period of time, that kind of a situation?

The Witness: Yes. Well, not—it came to a head I think with the Douglas decision to build commercial jets. In a way, Douglas was saying that they would be happy to deal with TWA, in fact, I had a call on that line, but that they didn't feel they could conclude a deal with Mr. Hughes, and they felt that they would devote their effort in other areas.

The Special Master: Did you report that to Mr. [R-12,903] Hughes?

The Witness: I don't recall reporting it in those specific terms, but there was—as I say, the discussion embraced this general situation.

The Special Master: What did Mr. Hughes say then? Did he make it clear that if Douglas didn't

want to deal with TWA by avoiding him that that wasn't to be done?

The Witness: Well, as I remember it, he took the attitude that Douglas would have to come to him before we did any more with them, and we did not work with Douglas. I think on top of all this the impression I had from Douglas was that Douglas feared we were trying to do them one better, and were simply trying to find out what they were doing, which, of course, was not the case.

The Special Master: That is, Douglas Aircraft thought that you were possibly trying to find out how far they had proceeded in the art and use that some place else to improve a plane for TWA?

The Witness: I had that impression, yes, sir.

The Special Master: But that was not the case?

The Witness: It wasn't stated in those terms.

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[Testimony—September 14, 1962]

[R-12,977]

• • • Q. In any event, it is fair to say that AVRO withdrew from that activity of offering that jet aircraft to U. S. airlines? A. That particular aircraft, as far as I can recall now, was not offered after it was withdrawn.

Q. And subsequently did AVRO offer any other type of aircraft to the U. S. airlines? A. Well, as far as I know, AVRO did not offer anything to the U. S. airlines at large, although they might have without my knowledge, obviously.

AVRO worked with me and with Mr. Hughes over a fairly extended period of time toward the development of a transport airplane. This was subsequent to the small four engine jet period that I just mentioned.

Excerpts from the Testimony of R. W. Rummel

As I recall it, this was 1954, 1955, and I think into 1956. I am not saying that we worked continuously. There were a number of meetings, and AVRO from time to time had produced plans and information for review.

I might say too, Mr. Davis, this was one of those projects which was highly confidential and extremely restricted in TWA as to the numbers of people that knew about it or had anything to do with it.

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[R-12,997] I might interject this, and say that DeHavilland were offering several versions of the Comet. This wasn't one airplane. It was one, a succeeding model, and then one they were thinking of, that kind of thing.

We talked and discussed airplane price, I think we talked about the general ability of a manufacturer like DeHavilland to produce aircraft that would measure up to standards that we were accustomed to, I think we talked about CAB approvals.

It was an effort to evaluate, let's say, and judge the wisdom of proceeding or not proceeding.

Q. Then you had discussions about the necessity or desirability of secrecy? A. Yes. This stemmed from Mr. Hughes.

Q. I would like you to describe or give us your recollection as to the nature of those discussions. A. Well, it was just a clear statement that I wasn't to talk to anybody, including the people in TWA, about this exercise. I am referring now to the particular sequence just before and then following the Chicago meeting.

The earlier investigations, while there were discussions with Hughes, as I recall them, were not particularly secret.

Excerpts from the Testimony of R. W. Rummel

[R-12,998] Q. What I am trying to understand, Mr. Rummel, is what reasons or explanations, if any, were given to you by Mr. Hughes in connection with this secrecy aspect. A. I don't recall any specific explanations, Mr. Davis.

Q. What was your understanding—excuse me. A. I don't recall any specific explanations. My understanding was that I wasn't to say anything.

Q. What was your understanding as to the reason for the request? A. Well, I don't know, but it wasn't a particularly unusual request, as I recall it.

Q. It was not unusual? A. No, to deal quietly, so to speak, in dealing in matters in which Mr. Hughes was interested.

Q. Do you recall whether or not Mr. Hughes gave you any reasons or explanations for not discussing these matters internally at TWA? A. No, I don't recall.

Q. Who was the chief executive officer of TWA during this period which you have been describing? Mr. Damon died in 1956, did he not? A. That's my recollection.

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[Testimony—September 17, 1962]

[R-13,141] • • • A. I don't recall TWA management making any decision with respect to the Sud offering. I am speaking now of the decision with Sud that led to the consideration that airplanes be manufactured over here.

Q. Who was that discussed with? Was that discussed within TWA, and if so, by whom? A. Not to any appreciable extent at all. It was discussed primarily between myself and Sud, and myself and Hughes, and then to the extent that Sud was able to talk to Hughes about it.

Excerpts from the Testimony of R. W. Rummel

Q. What I don't understand is why TWA gave any consideration to the manufacture of aircraft at this period. A. This was essentially a discussion between Hughes and myself, and just what may have been in Hughes' mind at that time I couldn't say. I don't think it would be correct to say that TWA gave any management consideration to the manufacture of aircraft as such. This possibility was explored by myself on behalf of Hughes.

Q. What conclusion, if any, did you reach as to the economics or desirability of acquiring some Caravelle jet aircraft as an addition to the TWA air fleet?

Mr. Barr: From the context, may I request Mr. Davis specify who he means by "you"?

[R-13,142] The Special Master: Will you explain by that in which of your capacities you consider you were acting at that time?

The Witness: In a good many cases, Mr. Special Master, it seemed to me the interests were parallel. It would be hard to say to what extent representing TWA and Hughes. At that time I was not a special agent of the Tool Company.

The Special Master: If you think you were acting on behalf of both, just so state.

The Witness: With respect to representation of what might fit the airline, I was reflecting TWA. With respect to the manufacture of airplanes, it was exploratory on behalf of Hughes, and I was not reflecting any views expressed to me by TWA management at all. In fact, this investigation was conducted in almost complete secrecy from TWA management.

The Special Master: To clarify that, I got the impression that the reason that you were con-

Excerpts from the Testimony of R. W. Rummel

sidering the manufacture of airplanes, either by Hughes or Hughes Aircraft, or TWA, was to get a better schedule of deliveries. Was that what you meant to convey?

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[Testimony—September 18, 1962]

[R-13,170] A. One case that comes to mind is sometime during the spring of 1960 I made a special trip to the West Coast, to San Diego, or at least attempted to, to explore further the Convair delivery situation. This was at the request of Charlie Thomas.

I found myself at the Hyatt House in Los Angeles, and I received a call from the Hughes office to stand by for further instructions.

I was joined there by Russel Rourke who, as I recall it, had received similar instructions, but I am not at the moment certain as to exactly how it came that he was there.

In any event, we were both asked to stand by, which we did. I reported this to Mr. Thomas so that he would understand why I wasn't in San Diego.

As I recall it, we stayed at the Hyatt House a day or a day and a half, and then moved to the Hollywood Roosevelt Hotel, and during the period there I had a number of conversations with Mr. Hughes, and during the entire period I had numbers of conversations with the Hughes office.

Many of these calls were simply in the nature of "Please stand by, you will receive a call from Mr. Hughes either the next 15 minutes or 30 minutes," whatever the case might be.

[R-13,171] More often than not these calls didn't come in, but I did talk to him a time or two.

It turned out the reason for not going to San Diego, as it was explained by Mr. Hughes, was that he wanted me

to go to Lockheed to hear Lockheed's explanation of the Electra accidents, what it had done to solve the problems that were uncovered by the accidents, or through investigations associated with the accidents, and to become familiar, to the extent Lockheed would reveal the information, with Lockheed's plan for correcting the Electras.

As I recall it, it took several days for the meeting to be held at Lockheed.

Q. Such a meeting was held, which you attended? A. Yes. After these several days had elapsed, I don't recall the number any more, a meeting was held at Lockheed which took at least the equivalent of a full day. I don't recall if it was a two-day meeting or not at the moment.

During the course of the meeting Lockheed presented the Electra story in quite a systematic manner, with various people coming in and handling their specialty, showing films of some of their tests, I would say a very thorough going presentation.

Lockheed at the time committed Mr. Rourke and I to secrecy because they then at that time had not revealed [R-13,172] this information to some of their customers.

Technical aspects, along with my understanding of Lockheed's plan for modifying existing Electras, as well as plans for changing those in production, were discussed with Mr. Hughes.

I raised the question from time to time about proceeding to San Diego, explaining that I was asked to go there, and that we were most anxious to get going with the airplanes, to have them finished and delivered, get going with them, and each time Mr. Hughes requested that I not go to San Diego.

I might say that this occurred shortly after the loss of an 880 by—

Excerpts from the Testimony of R. W. Rummel

Q. Delta? A. (Continuing)—Delta Airlines, and Mr. Hughes and I and many of us were anxious to know whether or not the loss of the 880 represented a design deficiency or not, and if it did, why, then, of course, we would have wanted it corrected at Convair.

In this connection, I had Mr. Parmet standing by, so to speak, the official inquiry in Atlanta, with the full understanding of Delta. This was arranged through Delta, and, of course, they readily understood our interest in the whole affair.

[R-13,173] The Special Master: Do you have any difficulty hearing down there?

Mr. Barr: Some, yes, sir.

The Special Master: Speak a little louder.

A The Delta accident caused us to focus attention into a number of areas. Some of these were in the nature of a re-review, some were not.

To put this in perspective, I probably should say that before the Delta accident Delta, who had received a number of airplanes by then, and had them in operation, had experienced hydraulic system difficulties.

TWA, who was then operating one 880 in pilot training, had also had a series of hydraulic pump failures.

On our re-examination of the hydraulic system we found several faults which we felt had to be corrected.

Correcting these involved changes in some plumbing, some of the valving, that is, relief valves, as I recall it, and finally involved a change in the pumps from one manufacturer to anotner.

We were attempting to bring pressure on Convair to move forward with these changes on an expedited basis on the aircraft that were still at Convair.

Excerpts from the Testimony of R. W. Rummel

The nature of the Delta accident was such as to suggest that the hydraulic system be thoroughly explored by [R-13,174] the teams that were investigating the wreckage on the scene. I was very anxious to—in addition to checking the Convair delivery situation which Mr. Thomas had requested, I was anxious to move forward and have our people move forward with Convair to get some of these items taken care of. Mr. Hughes specifically requested that we not do so.

We were also concerned with the spoiler effectiveness under certain conditions of hydraulic system malfunction, but I and my TWA associates on detailed review of the drawings and whatnot, and with some conversations with Convair, had come to the conclusion that the hydraulic system improvements would take care of that particular problem.

I might say the Delta accident was something of a mystery because of ths physical condition of the pilot, referring to the evidence that was found that suggested that he had a heart or an arterial condition. A cardiac, I guess. I am not a doctor, but along this line.

Mr. Hughes was extremely interested in all aspects of the accident, as he was in many such cases. We all were.

The delay in my talking to Convair finally consumed a number of weeks. I remember suggesting to Charlie Thomas to see if my presence—that is, the movement of me couldn't [R-13,175] be expedited, and I attempted to achieve this also in some of the conversations with Mr. Hughes and in talking to the Hughes office, because my talks with Hughes were of an intermittent nature.

I was cleared finally to go to San Diego, and asked to go there, which I did, but I was asked to please stand by until I heard further from Mr. Hughes, and not to talk to Convair.

Excerpts from the Testimony of R. W. Rummel

During this period there were some conversations with Convair through Bew's office.

I did not personally meet with Convair, although I did meet some of the Convair people socially during the time I was there. I was there a number of weeks. At no time was I cleared to talk to Convair.

In the meantime, our overhaul base personnel plus some of my own working from Kansas City kept pushing Convair for the hydraulic system corrections, and Convair did come through with a crash program to make these improvements, and they were installed in the airplanes, including the airplane that we had in pilot training. This was a plan that followed these considerations. I am not saying that it all was completed while I was there, but it was jelled and became a plan then.

I am not sure of this now, Mr. Davis, but as I [R-13,176] recall it, I was away from New York on that trip about five weeks.

There were intermittent calls from the Hughes office, several weeks without any calls from Hughes at all, as I recall it, and finally a call quite late one night, to the effect that I should return to New York, which I did.

I might say that while I didn't know it at the time a considerable period later I was talking to Jack Naish, who was then still president of Convair, in the presence of Russel Rourke, and Jack volunteered the information that he had been requested not to deal with me and to have Convair not deal with me on 990 and on 880 delivery matters, and he said, well, he was just telling me this, if I ever needed to call on him, to please keep it in mind. I am not sure what he meant.

There was a time or two when I was requested not to talk to Lockheed, but I think—well, let me say the impres-

sion I have now is—I am unable to be completely specific—the impression I have now is that this was in the nature of—that it wasn't timely or the appropriate time for me to be dealing on certain projects because Hughes hadn't laid the groundwork. Now, I am not saying Hughes said this. I am saying this is my recollection of the impression I had at the time.

[R-13,177] There were a few restrictions from time to time which at the time I accepted as more or less normal things regarding negotiations, where Hughes may have elected to negotiate certain facets of the contracts or the deal or the specs and then I would fit in with that plan. I am referring now to some of the Lockheed occasions. The one area that he was particularly—excuse me—one deal that he was particularly involved in personally was the 1049A deal. He had negotiated a package brief specification with Lockheed, and it fell far short of what we wanted accomplished, and he understood this.

Q. Who is "he"? A. Mr. Hughes. But Lockheed had remained adamant with respect to fulfilling our requests, and I believe Mr. Hughes was trying to include in the package more than we were able to finally get.

But one of the things we wanted was berths in the airplane, and I was instructed not to discuss berths with Lockheed, that he would handle this after contract signing in due course.

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[R-13,207] * * * will you tell me what happened? A. The reason I was a little vague before was that I didn't recall the particularity. I still don't, although I do recall having been requested, for a certain period of time, not to work or have my people work on the Electra project.

I am not certain that Mr. Hughes explained the reason. I recall having the impression—whether it was—this im-

pression represented an assumption on my part at the time or came directly from Hughes in way of explanation, I just frankly do not recall at the moment. It may come to me. But the impression I had was it just wasn't timely then to work with Lockheed on the Electras.

Q. Can you give me an idea of the period of time involved? A. No, I don't recall the specific period of time.

Q. Was it early in the development of the Electra by Lockheed, or late— A. Well, as I recall it, again, or as I think I recall it, I am not sure of this, in the beginning there was a fairly free exchange of information on the Electra, exchange of information between Lockheed and TWA. Then there was a period when this was in effect.

I think my assumption was that Hughes had reasons, [R-13,208] whatever they might be, that we should not work in this area at that time.

Q. Then there came a period of time when you again freely discussed with Lockheed— A. No, I don't recall ever freely discussing with Lockheed. There were times when we would meet with Lockheed on specific occasions, such as the meeting I described a moment ago on the solution to the Electra problems.

Q. Is that all that you can tell us as to your recollection? A. On that particular item that I mentioned a minute ago. I recalled a couple of other instances that I think bear on the question you asked.

Q. But you are finished with this one, that is all you remember about this one; is that correct? A. That is all that comes to mind now. I will be glad to come forward with more at such time as my memory is refreshed, if it is.

Q. Thank you.

Now identify these other occurrences which you have in mind. A. We had one sequence at Boeing during the

period that the 131s and 331s were committed for manufacture.

Mr. Hughes was attempting to obtain better delivery [R-13,209] positions, and had asked that I pursue this with Boeing, which I did. I remember talking to Bill Allen by phone.

Sometime following this Raymond Cook participated in meetings with Boeing toward working out a different distribution of initially manufactured airplanes between Boeing's initial customers than existed in order for TWA to obtain airplanes earlier than it otherwise would, and so it would obtain airplanes on a parity, if possible, with Pan American and American.

[R-13,210] As I recall it, the main interest was on obtaining parity with American Airlines, and this, I assume, reflected the plan to use the airplanes initially in domestic service.

As I recall it, Mr. Hughes claimed that he had an understanding with Mr. Allen that he would receive airplanes on delivery premise equal to American Airlines, and as I recall it, Mr. Allen did not recall this understanding, and all this led to the discussions and efforts that I speak of.

I had the impression that Mr. Hughes was referring to discussions that he had with Mr. Allen at or prior to or about the time that the orders were initially placed for the airplanes.

During the course of this particular negotiating effort there were numbers of conversations with Ray Cook. At one point I was called by the Hughes office. I don't recall the name of the chap at the moment that called, but he read verbatim instructions from Mr. Hughes, and advised he was reading the same instructions to myself and I think, but I am not absolutely sure, Mr. West.

Excerpts from the Testimony of R. W. Rummel

Q. Which Mr. West are you referring to now? A. Harry West, Mr. Harry L. West.

Q. Of the Chadbourne firm? A. Yes, sir. I am not positive of that, but as I recall it, they were read to three people; one was Ray Cook, [R-13,211] one was me, I think the other was Mr. West.

The instructions turned out to be quite lengthy, to the point where I asked or requested this chap at the Hughes office to send a copy on to me so I could read them. As I recall it, I had him read them twice to me, and I said, "Gee, it would sure help if you could send this to me," which he did send a copy of these instructions to me.

These instructions seemed to be being developed as they were being dictated. They were represented as coming directly from Hughes. It started out along the lines that we were to curtail our activities at Boeing with respect to the handling of changes and the like. I don't recall them in particularity now. I recall they went through a series of changes.

But they wound up as being almost a total restriction that I was obliged to impose on Mr. Zak and on my own office with respect to the signing of any and all papers, and as I recall it, otherwise handling official things, although I think it wound up indicating it was all right if Zak and his people still talked to some of the Boeing people.

The difficulty here was that I was unable to discuss the restrictions and the significance of the restrictions with Mr. Hughes. The restrictions were significant because with the passing of time it was clear that things would pile [R-13,212] up, we would not be giving Boeing answers that they needed when they needed them, and that

the program with the passing of time could be placed, to some extent, in jeopardy, because we would not be giving Boeing answers they needed when they needed them for Boeing to make its delivery dates. Therefore, Boeing, it seemed to me, with the passing of time, could come back on TWA or Hughes, really, since it was a Hughes contract, and say "Well, look, you didn't give us the information. At the same time you are asking for such and such delivery. You are defeating yourself. Delivery, in fact, is delayed."

This was my concern, I remember, on the hearing of these restrictions. I discussed it with Mr. Cook, discussed it with Mr. West. We felt obliged to literally follow the instructions, but I was hoping that at the first opportunity one or all of us would prevail upon Mr. Hughes to ease the restrictions.

Along with this, mention was made, and at the moment I do not recall if it came from Mr. Hughes or Mr. Cook or from whom, that some sort of action might be pending at Boeing because of the delivery issue, and that because of this action being pending Hughes did not want Boeing to get the idea that everything was all right by continuing or permitting things to continue in their normal course.

[R-13,213] It was some time later, and here again I don't recall the specific interval of time, but from the standpoint of the paper handling and making decisions or advising Boeing, things had come to a difficult and pressing situation, because we had abided with the request.

I might say that I felt Hughes had the right to make the request. This was a Hughes Tool contract.

But at some time, it might have been two months, I am not certain of this interval, Hughes did call one day, and I seized on the opportunity to point out the self-

defeating nature of this exercise. I felt in the interest of any continued negotiation he might have in min on promoting earlier deliveries that he should let us go ahead and handle things in an ordinary way, in the usual way, get caught up, and attain a better position with Boeing with respect to their construction program. That is, trying to expedite it rather than to hold things up.

He immediately agreed. He seemed completely distraught as I recall it, that this had not been called to his attention before. He wondered why someone hadn't mentioned it.

I explained I really had been trying, and he released us to move forward with our usual relations with Boeing.

I might say too that Boeing somehow during this period had managed to go ahead. They simply continued to build [R-13,214] airplanes.

I suppose they couldn't afford to not do so because of the airplanes that came behind Mr. Hughes, and for the larger part, we were able to finally get in the airplanes the things that we wanted, even though we had been held up during this particular period of time.

Q. This effort for early delivery, or your concern as to early delivery, was for delivery of the aircraft to whom, to TWA? A. Technically, for delivery to Hughes, but I don't think anyone had any doubt in their mind but what these Boeings were coming to TWA.

Q. The need for this exchange of information between you and your group or TWA and Boeing related to what, the specifications and requirements of TWA? A. Well, let me say, Mr. Davis, if I can try to put that in perspective, when the jets were ordered they weren't fully developed in design. The airplanes were designed in detail as a continuing program. There were numbers of

mockup conferences wherein the airline representatives participated with Boeing in selecting various features. There were cockpit mockups, there were interior mockups, there were cargo mockups, there were any number, that is, a large number, of mockup conferences which were all part of the Boeing customer [R-13,215] development program, you might say.

Boeing designed the airplane, but they designed it in collaboration with the customers.

There were obligations that were placed on Boeing with respect to various customer approvals of certain design features. This was done in the specifications, in the contract, I think in some side letters, possibly, to the contract. We had the obligation of reviewing certain Boeing drawings. We had the obligation of checking on the use of certain materials. These things all had to be done on a timely basis.

In addition to this, during the course of airplane development items would arise calling for Boeing to further develop or further design certain features, or perhaps a customer would initiate requests for designing certain things, change requests. These would come forward, to some extent, from TWA, and to some extent, from other customers.

When they would come forth from other customers Boeing had the practice, in many cases, of making those designs, designs which they agreed to develop for the other customers, available to all customers. These would have to be reviewed.

There were a number of occasions during the course of administering the contract, the technical phases of the [R-13,216] contract, and the specs, for continuing day to day work with Boeing, for numbers of meetings at

Boeing, meetings in Kansas City with Boeing, to resolve these issues.

These are the things that I referred to as having been curtailed during this particular period of time.

Q. And these things that you are referring to were, in effect, the specifications relating to the needs or requirements of TWA along the lines that you previously and generally have described? A. Oh, yes. The specifications —let me say the airplane were being configured to my best ability to satisfy TWA requirements.

Q. And the information which you and your group was giving to Boeing, was it guided exclusively by TWA's needs or requirements or specifications? A. No, I wouldn't say that. I hope I am not drawing too fine a line here, the terminology, but we set out, for example, to—along with Boeing—to try to standardize certain features—

Q. By "we" you mean TWA? A. Yes, and Boeing.

(Continuing)—certain features of the airplane, so that all customers would agree to take the same features. We felt this was a step in the right direction with respect [R-13,217] to cost.

Boeing had numbers of standardization meetings finally, participated in by many airlines, where the airlines were expected, to the extent they could, to give and take, come to reasonable requirements. The cockpit area was one of them, for example.

We were quite willing to go along with these things to the extent that we reasonably could.

Q. Were there some areas where you or TWA were unable to agree or conform to the requirements of other airlines? In other words, were you successful, were you entirely successful in this effort to standardize the aircraft? A. Well, no, I don't think that we or any other airline was entirely successful.

Excerpts from the Testimony of R. W. Rummel

We, I think, were successful to the point where Boeing specifically requested that we take the lead in numbers of these meetings, including some electronic areas, to try to bring industry together. I certainly would never indicate that we batted a hundred per cent. I am sure we didn't.

Q. Is it a fact, then, that as the end result of this process some of those aircraft being built by Boeing had requirements which emanated from TWA and which differed from the requirements of other airlines who also had orders with Boeing? [R-13,218] A. Oh, there is no doubt about it. I think it is true of all of the other customers too. Boeing did not achieve standardization throughout by any means.

Q. In your prior testimony you also referred to, I believe you said, an action or action pending at Boeing, and I am not sure that I fully understand what you meant by the word "action."

You mean there was a dispute going on at Boeing during this interval that you have referred to, possible legal action?

What did you mean by the word "action"? A. I was referring to the possibility of legal action. I do not recall the detail. I recall Mr. Cook was familiar with it at the time. I think, but am not completely certain, but I have the impression now, that some papers were actually drawn. I don't know if they were acted on or not at the moment.

Q. Your understanding was that this action or dispute related to the contentions being made by Hughes on the one hand and Boeing on the other with respect to this delivery position problem that you were trying to ameliorate? A. That's my recollection, yes. We were trying

to improve our relative deliveries compared to those of the competitor.

[R-13,219] Q. Have you finished your description of this instance when you were requested to withhold from communicating with Boeing in a certain area or areas? A. Yes. We had a—two or three, possibly more, instances with Boeing, at the time that airplanes were tendered for delivery, wherein they were not able to move forward with delivery for a period of days or weeks, as the case might be. I might say that in every case I can remember with airplanes on order by the Tool Company last minute checks were always made by me with the Tool Company or, in some cases, with Mr. Hughes, with respect to whether or not airplanes should be accepted for delivery.

This was, among other reasons, to assure that funds were available, that things were all set. I don't mean by that to indicate that we let things go to the last minute, because we certainly did not. It was organized, lawyers were busy preparing papers that had to be shuffled at the last minute, and so on. But it still was a check I would make before authorizing acceptance of airplanes at the facility, and as a result of these checks in some instances planes were held up at Boeing.

My understanding at the time was that it was pending completion of financing arrangements or making arrangements to, if you like, to transfer appropriately funds to Boeing. [R-13,220] At the moment I don't recall other things.

I might say that generally speaking this would be done before running acceptance flights, because, as a general thing, once acceptance flights had been completed, if in the remote contingency, the first acceptance flight would

reveal a fully acceptable airplane, then in that event, in most cases, we were obligated to move on and take it.

So these checks were usually made prior to authorizing the acceptance flights. Sometimes they were repeated following acceptance flights and prior to delivery. Normally more than one acceptance flight was required, I might add, by way of explanation.

Q. That completes your recollection of what occurred in connection with that incident? A. At Boeing?

Q. At Boeing. A. That is all that comes to mind now, Mr. Davis.

Mr. Davis: This would be a good time for a recess.

The Special Master: We will recess until 2:00 o'clock.

(Whereupon, at 12:45 p.m., a luncheon recess was taken.)

[R-13,221] * * *

Q. Mr. Rummel, after your luncheon recess was there anything you wanted to add or change or modify in your prior testimony? A. No.

Q. I believe that prior to the luncheon recess you had finished describing certain conversations or directions you had from Mr. Hughes relating to a Boeing procurement program involving the 131s and 331s. You had

finished describing that occurrence, had you not? A. I was answering the question with respect to occasions I recalled wherein Hughes had restricted contacts with Boeing. No sense in describing the whole of Boeing's program, unless I misunderstood you. I was simply going to say there were occasions when Mr. Hughes and his office were in direct contact with Ed Zak, and, of course, I am not able to testify directly as to what occurred in those instances.

Q. Mr. Zak reported to you? He was under you? A. Yes. He was an extension of my authority as a [R-13,222] special representative, and was in fact plant representative, and as such I think was viewed by the Hughes office as representing Hughes on the local scene, so to speak.

Q. You understand, do you not, that my questions were directed at any instance when you received instructions not to discuss certain matters with various manufacturers. I was not necessarily limiting myself to instructions that you personally received. I had in mind instructions received by anyone at TWA, which you are aware of, or perhaps you did not construe my prior question quite that broadly. A. No, I did not, Mr. Davis.

Q. Let us first finish with those which you personally received, and then we will explore what knowledge or information you have as to any comparable or other instructions received by anyone at TWA.

Do you have any other situations to which you had reference when you testified as you did at page 282 (12904) of the transcript of your testimony? A. I think this falls in that category. During 1959 Convair offered a number of 880s for final inspection or for acceptance flight purposes. As had been the custom, I contacted Hughes' representatives.

Excerpts from the Testimony of R. W. Rummel

Q. Can you identify who they were? [R-13,223] A. It varied. It included Raymond Holliday on occasion, Raymond Cook, Bill Gay, or I would leave word at the Hughes office as to what I wanted, and quite possibly, I am not completely certain of this, in the early part of that year was Leonard Schwartz, but I am not certain as to when Schwartz left Hughes' employ. I know I checked with Leonard on a good many things.

I started to say the check was the usual one to see if things were in readiness for delivery. I had understood from earlier and almost continuing contacts with Ray Cook and Ray Holliday that the pressing situation existed with respect to availability of funds.

So before pushing the situation to the edge of the cliff, I wanted to be sure that we were ready to move forward.

I had to take the position in each instance during that year with respect to aircraft that Convair wanted to offer for acceptance, that we would not move forward with either acceptance or on some occasions with final inspection.

By acceptance I am referring to the acceptance flights.

Convair reported they had made efforts beyond having contacted me in this respect. They contacted [R-13,224] the Tool Company. They called the Hughes office and made efforts to move forward.

Q. Someone told you that? A. Yes.

Q. Who? A. This came up a number of times. I am quite sure that Dudley Diggs was one of the men who had indicated that.

Q. Who was Dudley Diggs with? A. He was with Convair in charge of, I believe, commercial contracts for the corporation. It is possible that some others did, but I don't pin it down at the moment.

Excerpts from the Testimony of R. W. Rummel

Q. What did he say to you? What is your understanding of what he was saying to you? A. That they were also contacting Gay to advise Hughes Tool the airplane was ready, and were demanding acceptance action. By ready I am speaking of they wanted us to go ahead and complete inspection and/or complete our inspection flights.

We did not know whether the airplane was ready or not, and would not have known until after the airplane had been flown. Up to that point we had no reason to think that it wasn't ready for further action.

In other words, we would not have known as to the detailed functional performance of the airplane systems [R-13,225] other than by flight-testing the airplane. This was one of the criteria for acceptance of the airplane.

At one point I had to advise Mr. Bew on specific requests of Mr. Hughes that he was not to inspect any 990s or 990 components or parts. He was not to discuss 990s, and the specific instruction got to the point where the men in the shop weren't even to look toward a 990 part or component.

Mr. Williams: Not even to look towards?

The Witness: Yes, they weren't to be in that part of the shop. I passed this on to Bew, who heard me.

At one point Convair was preparing for flight tests involving or aimed toward learning more about the characteristics over the wings, as I recall it, and this included Convair having started to build certain breadboard leading edge devices. By breadboard I mean not the final production article, but simulated units that were put on specifically for the purpose and in a manner necessarily like would be in production, but simply to wind up with a represen-

tative article with respect to the purpose of the test, which in this case was aerodynamic in nature.

It was either Hughes, and I can't recall—it [R-13,226] was either Hughes, Bill Gay or someone else in the Hughes office, left word that Convair was not to proceed to prepare for these tests, and in no event was Convair to run the tests.

Now that I think about it, I am not sure this categorically fits your specific perimeter here, but Hughes had requested that Convair not demonstrate 880s to others than people representing him. I am not sure he put it in those terms, but it was limited to plant representatives, the minimum of inspectors that had to fly on the airplane, our flight crew, and so on.

At one point he asked that Bew see that this wasn't done, and he asked me to do the same thing —that the action we took was to ask Convair to clear demonstration flights either with me or with the Hughes office. Except for a few occasions insofar as I know, they did try to clear this.

The impression I have now is that the directive became so broad as to include not only the airplanes Hughes had on order but also the ones that Delta had on order, and also the house airplanes.

Q. You mean Convair's own? A. Yes, they had one 880 in test at one time. There [R-13,227] were numbers of calls between myself and Bill Gay reporting on this situation. Convair, for example, had a request to fly some South American dignitaries which we turned down. They had a request to fly U. S. government people which I think was turned down.

Excerpts from the Testimony of R. W. Rummel

In some cases they did go ahead. As I recall they flew a KLM group, or someone they thought was a hot prospect.

I might deviate just for a moment. Now that that came to mind, there is also coming back a little vaguely, but it is not an identical situation at all, but a situation at Boeing where both myself and Zak, and I don't recall whether I handed this on to Zak or we both called, but we had a directive to minimize the Boeing flight test activity, and it got to the point where Zak was to obtain, or he was to clear all personnel on every airplane that was on order for Hughes, including Boeing's own personnel. He was to obtain every piece of paper that was written on the airplane, of any kind.

Q. By written on the airplane, you mean written about the airplane? A. Yes, flight test papers. He was to review all prior flight tests in detail. He was to collect all this data, and Boeing were to do no more of that without his [R-13,228] specific concurrence. This was a directive that could not be implemented, although Zak did what he could with it.

It seems to me there were other occasions, but I don't recall any at the moment, Mr. Davis.

Q. With respect to these instructions or directives as to the manner in which flight tests were to be conducted, or information given to others relating to these flight tests, et cetera, which you have been testifying about, did you receive any explanations or reasons for those measures or instructions? A. I don't recall any specific explanations. I seem to have the impression now that I either had the impression then or the understanding then with respect to the Convair demonstration flights that Hughes didn't want any extra time on the airplanes, but

Excerpts from the Testimony of R. W. Rummel

I don't remember any explanation as to why this was particularly. It caused considerable concern at Convair, because Convair were trying to sell additional airplanes. They felt the demonstration flight was one way to get to the customer, and from their point of view they expressed the thought that, gee, if they sold more it would help Hughes, or Hughes and TWA, because it would add on to their rebate. They had difficulty in understanding these restrictions.

Q. Can you identify the period when those restrictions [R-13,229] were in effect? A. It was primarily, as I recall it—I am speaking now of the demonstration restrictions—during 1960, but it might have been during the last half or late 1959. I can't be too specific here.

Q. At that time how many aircraft, these 880s, were available or had been received by TWA? A. Had been received?

Q. Yes. A. We received one in the fall of 1959, as I recall it. We didn't receive any more until January 1961.

Q. Were there other 880s completed at Convair? A. Oh, yes, Delta, I think, had received all of its airplanes before we received our second, and additionally, there were numbers of 880s flying in test and otherwise, that had been test-flown by Convair and then tendered to us for delivery. That is what I referred to in that other instance.

* * * * *

Excerpts from the Testimony of R. W. Rummel

[R-13,232] Q. Was it faster? A. Yes. I didn't mention that. It was designed to be faster. It in fact was not faster when it was produced.

Q. But at that time it was believed to be an improved version of the 880? Was that the concept? A. Oh, yes. This was undoubtedly Convair's intention, and I am sure it was American's intention as well. American was the initial customer for the airplane—American Airlines.

Q. Were you ever told why Mr. Hughes wanted to maintain a shroud of secrecy with respect to contacts at Convair relating to the 990? A. It didn't turn out to be much of a secret. The restriction was that we weren't to do any work on specifications or on the contract, and later on we were not to inspect any of the parts, even after we understood Hughes had an interest in a certain number of the airplanes.

Mr. Williams: That question didn't call for that answer.

A. I am sorry.

Mr. Williams: Counsel wanted to know if you were told any reasons for the secrecy—if you were given any reasons for the secrecy.

I have no objection to the answer as it stands.

A. I don't recall any explanation as such. Some of [R-13,233] the guide lines came from Hughes Tool people other than Hughes. As I recall it, Ray Holliday at a time or two said I was not to do any work in that area, and I believe Raymond Cook did. I cannot be sure of Leonard Schwartz at this point. Whether Bill Gay did or not, at the moment I don't recall, and I do not recall a specific explanation as to why.

Excerpts from the Testimony of R. W. Rummel

By Mr. Davis:

Q. What was your understanding at the time, or did you have an understanding as to any reason why? A. I was told that the airplanes were being ordered in accordance with the American Airline's specifications. I don't recall any understanding with anybody as to the reason. I could have assumed a number of things at that time.

Q. Did you make some assumptions at that time? A. Gee, I don't recall any particular assumptions, or not. I would be entirely speculative now. One might have assumed that you get quicker delivery by more of the same thing, and one might have assumed other things.

Q. I am referring to the reasons you were asked not to do any work on the specifications. A. I don't recall making any assumptions. I recall making some recommendations.

Q. What were the recommendations that you recall making [R-13,234] then? A. I recommended that if Hughes intended any of these airplanes to come to TWA, that he should permit us to have the airplane configured in accordance with their minimum requirements, and we should get going on a timely basis.

Q. Do you recall to whom, how or when you made such a recommendation? A. This was mentioned, I am sure, to Mr. Holliday and to Mr. Cook. This was the period when I was not speaking to Hughes very frequently, and I am not certain that I made that recommendation directly to him, although I may have.

Q. And the year again was approximately when—1960, or late 1959, or when? A. This particular thing I have in mind would probably be in late 1959 and during 1960. I am not certain exactly when it started. It may all have been in 1960. I am just not sure of that.

Excerpts from the Testimony of R. W. Rummel

Q. I recall your prior testimony as to the effort, if not leadership, that TWA played in connection with trying to standardize the specifications of various airlines.

I believe you mentioned that in connection with the Boeing program. Was American Airlines one of those who participated in that effort to standardize? A. Yes, it was.

[R-13,235] Q. In connection with that effort, can you describe to what extent the specifications or requirements of American differed from those of TWA? A. I certainly could not in detail, no.

Q. Can you give us an idea? I am trying to get an understanding as to the nature of scope of those differences. Can you do that for us? A. There were somewhat different instrument arrangements and instruments in the cockpit. Electrical switches are thrown in a different direction. The baggage compartment is different. American obtained preloaded containers, and we did not. There are numbers of differences, Mr. Davis.

Q. I am trying to understand how significant they were. A. The signficance gets back, I think, to the things we were talking about the first day—the precedents of American having certain things and we having other things. The signficance with respect to possibly provisioning costs, with respect to pilot training, with respect to preferences, to some extent, and what their true significance might be to American, I just couldn't hope to state.

I wouldn't know how to compare it to anything other than what we have, because we never arrived at a [R-13,236] standard so as to know what the standard might be.

Q. As a result of the efforts that were made in connection with the Boeing procurement program, and the

attempted cooperation between these various airlines was it particularly successful? A. I would say as I did before, that we came closer to achieving standardization with these jets than any time previous.

Q. I understand that. A. But it did not establish a standard.

Q. I appreciate that also. A. It established some detailed standards, but not an overall standard.

Q. Now what I am trying to establish is how significant, how major were those remaining differences that you were not able to resolve in connection with jets. A. They were significant enough to have caused, in the case of the 990, either a conversion program or an expensive program of retaining and retraining pilots on the basis that the pilots be isolated to that particular kind of airplane. The cheaper of the two, in our opinion, without having been able to go into it in great depth, could have standardized the airplane more nearly with what we had, rather than to deviate the extra provision cost, and [R-13,237] training, and so on, but I can't give you a number in dollars.

Q. Isn't it a fact that there came a time when you did make some effort to determine the cost of converting a 990 from these American differences to TWA requirements? A. There was a brief interlude—maybe that isn't the right way to say it. There was a brief period when on directions, as I recall it, from Raymond Cook, we undertook what turned out to be the beginning of a specification negotiation at Convair. To the extent that this occurred, and I forgot it a moment ago, this would modify my statement that it was throughout 1960 that we were restricted. There was a period of a few weeks where this was not true. Right now I don't recall when it was. I think it was in the early part of the year.

Excerpts from the Testimony of R. W. Rummel

I sent a small team of TWA people to Convair. I went down myself the first couple of days. This team set out to try to determine what the differences were between American's 990 and TWA's 880.

Q. This was at the request of Mr. Cook? A. That is my recollection. I am quite sure it was Mr. Cook. It was through the specific request of the Tool Company, and it was represented as representing Hughes' views, which had to be, because I was under the directive to do nothing from Hughes. I don't recall it coming direct-
[R-13,238] ly from Hughes.

Q. I understand. I am sorry for the interruption. A. That is quite all right. I am sorry I wasn't clear. The negotiating approach I felt was desirable with Convair was discussed with Mr. Cook, and this was Mr. Cook and Mr. Cook agreed this was a reasonable approach to take under the circumstances that existed. A number of times in previous deals I would have these kind of discussions with Mr. Hughes. But the approach was to ask Convair to price out all differences that they wanted to price out. In other words, we tried to start by using the 880 speculation as a basis, and convert it to 990 spec, and the idea behind it, which we explained to Convair, was to determine what areas of significance there were between the two.

Convair's approach, as I recall it, was to start "here is a 990 spec and here it is. What do you want to change on it?"

Convair started down the road that we had suggested, and after a meeting of some—I am guessing now, but I would guess maybe a week or ten days at the most, we had gone through the exercise and it was then up to Convair to come up with the information that was requested by

way of price out, could they comply or couldn't they comply, [R-13,239] and so on. I say we made it clear to them—it wasn't specific like asking, but we wanted to know what we were getting into. We wanted to be rational.

I cannot be specific on the time, but it was a few weeks after this Bob Loomis—

Q. Bob Loomis being with— A. Convair. He was either general manager of the San Diego division, or president of it—he advised Bew, and Bew in turn advised me of this conversation, that Loomis said that they stood to invest about $50,000 in this investigation, unless there was clear evidence of serious interest from Hughes that this is what Hughes wanted. They weren't about to spend that money. Almost the same time, as I recall it, within days, Hughes called and wanted to know what was going on, and I explained it to him. He said that it wasn't at all what he desired. That there was a horrible misunderstanding. I am not trying to quote him word for word, but give you my recollection of the substance. That what I should do, and we had to be very careful, because things were ticklish at Convair—there were all sorts of problems, and he didn't want to do anything to cause him too much concern, so to be very careful not to make an issue, but to back out. He felt probably the thing to do would be to withdraw men one at a [R-13,240] time, and just gradually let the issue die. That was the specific request. As I recall it, it was during that conversation that he personally placed restrictions on further work on the Convair specifications, looking at 990 parts, or anything like that.

I then withdrew a little at a time, and it all fit, because Loomis had already said he didn't want to go much

further. Whether he had talked to Hughes or not, I don't know.

Q. As a result of this you did not get any information as to how this conversation would price out? A. No, I didn't say that Mr. Davis. We did not get the full story from Convair. We did get, I think, some information. To my best knowledge, we never received the results of the investigation. In fact, I guess I never knew whether Convair completed it or not. I probably would have assumed they would not have under all the circumstances.

Q. What was the information you did receive as to the probable cost of effecting such a conversion? A. I don't know. I had Mr. Rourke, later on, in relation to some studies we were making, make estimates on what he thought the minimum conversion cost would be to make the airplanes suitable for TWA, but I couldn't be specific as to what had been received from Convair prior to [R-13,241] that time.

Q. Give me now what conclusions you or Mr. Rourke or TWA reached as to the probable cost. A. I don't remember the cost.

Q. Can you give me an idea? A. I just don't remember, Mr. Davis. We looked at a number of such things. Not only the 990, but we looked at the cost of converting some 880-Ms. Capitol had an order at one time, and I just don't remember.

Q. I understand you don't remember the exact figure. I am trying to get an idea of the range, as you just pointed out. You did make studies to determine the cost of converting these cockpit differences from the Capitol Airline 880-M to the TWA requirements. Mr. Rourke, you said, made a study based upon what information you had, and based upon your efforts at Boeing to standardize.

Excerpts from the Testimony of R. W. Rummel

What I am trying to get you to tell us, Mr. Rummel, is not an exact figure, not a scientifically exact figure, but to give us an idea of whether we are talking about millions of dollars, or hundreds of dollars. What are we talking about? A. I don't recall. As I recall Rourke's estimates, it included not only conversion, but completing the airplanes. As I recall it, the 990s were ordered without [R-13,242] seats. The cost of seats would undoubtedly have been in the airplane estimate that Rourke provided. I don't recall whether the galley was in or out, in the event it had to have a galley, and then the mechanical reconfiguration that was done several ways, Mr. Davis. The one on the bare minimum. I think another was on a desirable basis. One of the differences here was standardization of the auto-pilot, namely, an auto-pilot system different from the 880. This was a matter of estimating the price out. The cost of standardization and savings on spares cost over-simplified some against the cost of accepting what they had in buying extra spares. These were estimates that Mr. Rourke came to, I think, primarily as his own estimates.

The estimates, I think, covered a range, depending on what was selected. I don't recall at the moment what the minimum airplane was.

Of course, another factor here was the time of making the modifications—the question of who would do that. If Convair would do it, what would they charge. If TWA did it, how do we charge the time out of service against what otherwise might be productive time, as during the conversion time, and so on.

I would like to give you a figure. Maybe it will come to me. It just doesn't pop into mind right now.

[R-13,243] Q. I think you are trying too much to arrive at what you might consider a reliable figure. For this

purpose I will be satisfied to get an idea of the range of the figure involved in connection with the mechanical conversion of the cockpit configuration. A. The cockpit only?

Q. Yes. A. I completely misunderstood your question. I am sorry.

Q. A moment ago you indicated that the difference where the switches were, et cetera, created a problem of either training special crews, or going through the cost of conversion. For the moment I would like you to stay in that area and give me an idea of what would be involved in terms of a range, if you can't do any better than that. A. I don't remember the figure on the cockpit only. I don't think we looked at it quite that way. We looked at the airplane overall. I am sure that was a piece of it.

Q. Without trying to remember the figure arrived at by Mr. Rourke in his estimate, as a component of that estimate, what I am trying to get is, based on your knowledge and experience, and this is quite extensive, I realize from your testimony, is to give us here who know nothing about these matters some idea of the probable cost involved.

By that I mean not an exact figure, but a range. [R-13,244] $50,000 per aircraft, $100,000, $150,000? A. Mr. Davis, because my experience is somewhat extensive, I hesitate, because I know from experience that you can get into such a broad gamit and range of prices, whether you change an instrument or modify the dial of the instrument, it comes back to looking at the details square in the eye and finding out what the costs are. It could be a big range, and I don't remember what the figure was that we came up with.

Q. Give me the range—how big the spread might be in the range. Can't you do that for me? A. You are comparing American to United specifically, and the 990 specifically.

Excerpts from the Testimony of R. W. Rummel

Q. Qualify your answer however you wish, but my understanding of your testimony is that you started out at Convair to determine what the price out would be for changing the 990s that were being built, or which cockpits were being built according to American specs.

You testified efforts were made during the Boeing procurement episode to standardize, and you standardized to some extent, but in some areas you were unable to come to an agreement.

You must have some general idea of the difference.

You referred to the fact that at one time you made a study to determine what the cost would be to convert Capitol [R-13,245] Airlines 880-Ms that were presumably, according to Capitol Airlines' configuration—I am referring to cockpit configuration—and you answer however you want to, but what I do want from you, Mr. Rummel, if I may insist, is some understanding of the cost that would be involved.

You can, if you want to, give an estimate as to what that cost would be. If it was done while the aircraft was on the production line, what the cost would be after the aircraft was completed, or what it would be if TWA had to do it, or if you were asking Convair to do it.

However you want to do it, give me an idea of what a reasonable person should anticipate the cost to be, or the range in which he should anticipate the cost to be.

The Special Master: Mr. Davis, I don't understand the reference to United.

Mr. Davis: I said Capitol.

The Special Master: You did, but I understood the witness to say between United and American, when he was responding.

Excerpts from the Testimony of R. W. Rummel

Mr. Davis: He was asking me if I wanted him to estimate the difference from changing from United configuration to TWA, or from American to TWA.

The Special Master: I heard him say from American to United, and that is what I was having difficulty with— [R-13,246] how that made any difference.

A. I don't recall the reference to United. It would have been a slip of the tongue, Mr. Special Master. I am sorry. I meant to say between American and TWA.

The Special Master: I understand it in that context.

The Witness: I just don't have a clear recollection. The autopilot, I recall, and I am trying not to be detailed, was a request from our pilots that did affect the cockpit. We looked at it both ways. That would have been a very expensive modification.

By Mr. Davis:

Q. By "very expensive," what do you mean? A. The autopilot?

Q. Yes. A. As I recall it, it was around $125,000 or $130,000. But that in fairness is not specifically a cockpit item, except it might be imposed by cockpit requirements. It relates to flying characteristics to some extent. How it locks onto the lights, and this and that. This was a pilot requirement. It also is a desired item on the part of provisioning people in TWA, because they could see ways of saving money if they had this unit standard, but this was put in both ways.

My recollection is vague, and I am not sure of this, [R-13,247] but I think that the flight director group—I don't know what the extent of the differences were at the moment. This has been some time ago now, and I really hadn't thought much about it.

I think the Kefis system is different.

The switches, I mentioned earlier, operated in a different direction.

Q. You understand I am trying to get an estimate of an overall dollar figure? A. Yes, I understand. I am trying to run through it mentally to comply with your request. I don't remember the number that Rourke came up with, and I don't remember the differences in sufficient detail to really give you a reasonable estimate.

The Special Master: Mr. Davis, I think we might save time on this if the witness could refresh himself during a recess sometime, and maybe tell you tomorrow or Thursday.

Mr. Davis: I think that would be very helpful.

By Mr. Davis:

Q. Mr. Rummel, apparently since you did have occasion on behalf of TWA to consider the possible reconfiguration —still referring to cockpit reconfiguration—of the Capitol Airline 880-M to TWA, you might be able to give us that. [R-13,248] Also let me ask you this. Did you, and by you, I mean TWA, during 1961 perhaps obtain some information either from Convair or from your own information as to what that cost would be at a time when you may have been considering the possibility of acquiring those 990s? Let me put it this way. I believe Mr. Tillinghast at one point indicated that some thought was given to such a possibility. I am suggesting to you that perhaps at

that time, or let me ask you now— A. Very serious thought was given to the possibility of obtaining 990s from Convair. At one point Convair came forward with a letter of proposal for new 990s.

I realize that doesn't specifically answer what you asked. I think you asked whether we had obtained from Convair an estimate for the conversion of 990s built to American specs, to our configuration.

Q. That is what I am driving at. A. I don't specifically recall it.

Q. See if you can refresh your recollection somewhat, because I believe I was in that area the first day, and you were equally vague then. It would assist me if you could be a little more specific, understanding that I am not trying to get an exact dollar figure, but merely some idea of the range of the cost of doing that. A. I do not recall the dollar figure from Convair, but [R-13,249] I will see if I can refresh myself somewhere.

Q. While we are on the 990, are you at all familiar with the circumstances under which an order was placed with Convair for 990s by the Hughes Tool Company? A. No. I was told a time or two by Mr. Holliday that Hughes, he for Hughes, or Hughes Tool for Hughes, had taken some action on the 990. I think he at one time indicated some letter agreements had been signed, the hold harmless type—protecting delivery positions—and I think agreeing that Convair costs—if it didn't happen, or something of that nature. I didn't participate in this directly in any way. I was the recipient of news.

Q. You were the recipient of news? A. From Mr. Holliday, or from Raymond Cook. I think mostly from Mr. Holliday.

Q. Do you know of anyone at TWA who has any knowledge or familiarity with the circumstances under which

those 990s were ordered? A. The circumstances under which they were ordered?

Q. Yes, what happened? A. No, I would not know of anyone. I don't recall anyone indicating.

Q. At the time when you were having these discussions with Mr. Holliday or Mr. Cook, with particular reference to [R-13,250] the time when Mr. Cook either suggested or agreed with you or arranged for your team going to Convair for that abortive effort to develop a pricing out of converting the aircraft, was anything said to you, or did you have any understanding of any kind as to whether or not those 990s were in fact intended for ultimate use by TWA? A. No. I think there probably was an inherent implication that this might turn out to be the case some day, but there certainly wasn't any understanding of it with anybody.

Q. I am not referring to any understanding or any agreement in that sense. I am trying to find out what your understanding was, what your assumptions, if you please, were as to whether those 990s were on order with Convair—as to where they were to be ultimately used. A. My position with Hughes Tool in this regard was simply that if Hughes ever intended those airplanes to become TWA airplanes, it was to TWA's interest to be able to configure those airplanes so they would be standard to the extent that it was economically feasible to make them standard with our requirements. Ray Cook at one point indicated we were to determine through this negotiation, the specification negotiation, and make a determination of the configuration. As I said, I even discussed the strategy of moving forward with a specification negotiation with Mr. Cook.

Excerpts from the Testimony of R. W. Rummel

[R-13,251] Q. Those 990s were on order during the regime of Mr. Thomas, is that correct? A. I don't really know when they were placed on firm order.

Q. In any event, whenever the exact date was when they were placed on exact order, they were on order during the time that Mr. Thomas was chief executive officer, isn't that right? A. I don't know when they were placed on order. I understand there were some letter agreements during that time, yes.

Q. Whenever they were placed on order, they were in fact being manufactured by Convair during a period of time when Mr. Thomas was president of TWA, isn't that correct? A. My recollection there would be that Convair probably, and this is speculative, had to order certain material or parts in order to protect delivery positions during that period of time, yes.

Q. Let me ask you this. Are you familiar with the circumstances or decisions made in connection with the reduction of the number of 880s which TWA was to acquire from 30 to 20 or 24, or some other figure? A. I am not familiar with how the decision was made or who made it.

Q. But you are aware of the fact that that event did [R-13,252] take place? A. A reduction from 30 to 20?

Q. Yes. A. Yes, I certainly am.

Q. When did that take place, do you recall? A. It seemed to me to dance around—there were various numbers back and forth. As I recall it, TWA's understanding that it would get 20 was made during Thomas' regime. I don't remember exactly when, but that is my recollection. It was during his regime, and then did not from that time on change from 20.

Q. Did you or your group make any studies or evaluations as to the desirability of reducing the number of

880s from 30 to 20, in terms of TWA's need, the size of its fleet, the economic use of the aircraft? A. My personal recommendation throughout was that TWA should have 30 airplanes. However, we did make a study showing what TWA could do with 20 when it was requested that we do that.

Q. Who requested you to do that? A. I am just a little vague on that. I think we were advised that it was 20, and I think we then in our projections included 20.

Q. Did you have any discussions at any time—

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[R-13,259] * * *. However, this was long, long after the phone conversation I referred to a moment ago with Mr. Schwartz.

I recall, I think, that this took place with Thomas some time during 1960. I don't recall exactly when. I think at the same meeting he expressed the view that he personally thought the industry had overbought. I remember arguing with him some on that.

I believe Mr. Fellows was present at the meeting, and argued against that idea too.

I recall Thomas having commented pretty much as I understood you to read this, but this was quite late in the game, and long after the Schwartz conversation.

Q. It that your full and complete recollection relating to that point of view? Did any other senior officers at TWA express comparable views? A. I think Leslie did. I don't know that he expressed comparable views as to the reasons for his views, but I think he did express a view that 20 was enough.

Q. Do you recall views being expressed, either by Mr. Thomas or any other senior officer at TWA to the effect that it would be desirable not to over-commit TWA for a

jet fleet until it could be ascertained useful and profitable, they could be operated, what improvements might be

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[R-13,265] • • •

As I understood it then, as I recall it now, I advised Thomas that the setting aside initially of those airplanes did not result in a delay, but that Convair was already delayed to some extent—that it might have the opposite effect.

Later on I had to change this because there was too much set aside and there was too much holding up.

I don't tie the dates in here, but I recall at one time having so advised Thomas. I did my best to keep him advised of things as they were as I saw them. I am not clear on the dates here about the airplanes being under guard, and that sort of thing. As I recall it, we kept him fairly well advised.

Q. You were keeping Mr. Thomas, the chief executive officer of TWA, pretty well advised as to what was taking place at Convair in connection with this 880 program? A. I thought I was, yes. I made the effort.

Q. With respect to these four aircraft that were pulled off the line, so to speak, and put under guard, was that in connection with the so-called bailment arrangement? Is that what this refers to? [R-13,266] A. As I recall it, there were four airplanes finally placed under bailment. As I recall it, they were pulled off one or two at a time, but I can't be sure. I think the bailment agreement followed by some period, whatever it was, the pulling off or setting aside of these four airplanes.

Excerpts from the Testimony of R. W. Rummel

Q. Do you recall approximately when that took place, or was there a period of time during which it was taking place? A. As I recall it, it was during 1959 and early 1960, but I am not sure of the precise time, Mr. Davis.

Q. Can you relate it to the period before or after the Delta incident, involving an 880? Was it before or after that? Can you identify it that way? A. I am not certain. I think probably before, but I am not sure. I might say that I was simply an observer here by being advised by Bew or others that the airplanes were set aside.

Q. Can you relate that to the period during which you were active in reviewing the hydraulic system and other problems which you have previously identified as having occurred in the spring of 1960? A. I would be guessing.

Q. Do you have any information of any kind relating to [R-13,267] the reasons why those aircraft were pulled off the line? A. No.

Q. You have no information about that at all? A. I don't recall understanding why they were pulled off the line. I do not recall any discussions with Hughes on the subject at all. I recall being advised that they were set aside. Convair acquiesced to the Tool Company's request that they be set aside. I recall hearing that some or all were suddenly under armed guard. I recall being told they were towed, two of them, across the field and parked, but I don't recall understanding the reasons behind all this, or being advised of it.

Q. Do you have any information of any kind as to why, or which might tend to explain why they were under armed guard? A. I don't recall having that explained, Mr. Davis. This was not particularly new. There had been previous cases where airplanes had been put under armed guard. I put one under armed guard myself at Mr. Hughes' request.

Excerpts from the Testimony of R. W. Rummel

Q. Going back to this question of reducing the procurement of 880s from 30 to 20, can you tell me when discussions or thoughts began relating to the possibility of reducing the order from 30 to 20? [R-13,268] A. I recall a highly informal conversation at the Waldorf Hotel with Leonard Schwartz. I believe Rus Rourke was there, and I believe Ray Cook was, but I am not absolutely sure of that. This was shortly after Leonard became associated with the Tool Company, and shortly after he was disassociated with Lockheed.

I don't remember the particularity, but I remember he started talking about the severe problems of arranging for the financing of such a tremendous fleet of jets. I believe he mentioned talking to First Boston, but I cannot be sure that was in this conversation. I think it was—and that in his view the order had to be cut back.

I recall having tried to impress on Leonard what in my view was the need for our getting the 18 Boeings, as well as the 30 Convairs.

I say this was purely an informal talk, not prearranged. We just happened to meet, I think, in the lobby or some such thing as that.

Q. I am referring to more serious discussions within TWA, within the management group of TWA. A. I took Leonard's views seriously because I think he was speaking in a serious vein. I tried to convince him they should get all of the airplanes, although I could not at that time—I never have been able to comment too knowledgeably on [R-13,269] the financing area.

As I recall it, the number of airplanes danced around some, as I said before, from time to time.

Q. Which was after the Tool Company had committed itself for 30? A. Oh, yes, this was after Schwartz called

me and advised it was going to be 20. I asked him what 20. He didn't know. I don't recall any specific management discussions.

Q. Perhaps your mind will work more effectively if I talked in this manner. Can you describe the circumstances or studies that were made at TWA which led to the placement of an order for 30? A I think that is in the testimony, Mr. Davis. I could repeat it.

Q. No, I don't believe that you have testified as to what were the factors considered, and who participated in the decision to place an order for 30—880s. A. I thought I had, but maybe not. When we were into the negotiation on the 880s during, I think 1956, I think I contacted Mr. Fellows who did not work for me then, but represented a traffic viewpoint in the company, and asked for his recommendation on how many such airplanes he thought TWA could use. I gave him the general timing of availability. He said he would look at it and contact me.

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[Testimony—September 20, 1962]

[R-13,297] Was that because you already had some Boeings of this type? I note in your answer that you were adding a mere ten 727s, and that is certainly a different type of aircraft, is it not? A. Yes.

Q. Different from anything that was already included in the fleet of TWA, isn't that right? A. Yes.

Q. Was that an economical number of new type of aircraft to add to a fleet?

Mr. Williams: Wait a minute. You have a question pending that is unanswered, Mr. Davis, and that is why did they choose Boeings instead of Convairs. Let's get that answered first.

Excerpts from the Testimony of R. W. Rummel

The Special Master: That's right. He may answer that question.

A. The decision to recommend Boeings was arrived at tediously and was made as a result of an extremely comprehensive equipment study and market study that included not only projections for TWA but for its principal competitors, included consideration of availability of aircraft along with fleet cost estimates, included consideration of operating cost aspects of the airplanes and related items.

You mentioned one, the similarity to what we then [R-13,298] had. We had a similarity fact in a number of areas. We compared Boeings to Boeings, 880s to 880-Ms, 990s to the fact that we had Convairs, and so on, and attempted to rationalize each one. Then we also considered public acceptance, market conditions that we then foresaw as being in existence.

As I say, it was a comprehensive study, and the planning and research conclusion that came out of this study indicated, for a number of reasons, the Boeing route would be better than going the Convair route.

Now, one of the needs that we foresaw, Mr. Davis, was the need for additional international airlines. Pan Am either had then ordered or we were certain would order, and I don't recall the precise situation now, 331-Bs. I believe they had then ordered 331-B types.

Now, I might pause to say that the 331 is a number that was carried forward from the original Hughes order and designates a customer. So in the case of Pan American, it was the same basic type airplane, but it carried a different model number.

Excerpts from the Testimony of R. W. Rummel

Now, Pan Am planned to fly this airplane we thought in polar service. It had a range capability that exceeded anything we had. We had competitive routes.

In this instance we could—we felt it was far and away the best international airplane. It was an airplane [R-13,299] which, however, would have had a number of special and costly items with respect to provisioning; spare engines and other items in the airplane.

I don't mean to indicate that the 331-B is any more dissimilar from the 331 than it had to be, but some of these things were inherent in the airplane, and some things we did not standardize on. Standardization was an important item.

The Convair simply wasn't eligible as an airplane type, with respect to its performance, for application in this type service. It didn't have the range by any means.

[R-13,300] This was a factor which I think helped sway the decision toward Boeing rather than Convair with respect to domestic use, because there we saw the need for an additional fleet, the 131-B had the speed and the range that was desired, it had more common parts with the 131 than the 331-B did relative to the 331, but they were all very, very similar with respect to not only components but significant items such as pilot training or retraining of pilots, provisioning costs and the like.

For example, on spare engines, we wound up with simply one more spare engine for the—serving both then, international and domestic, but an engine which was to a large extent identical to an engine which we already had.

Now, I might say that looking at the 990 in relation to the 880 great similarity also existed with respect to the engine.

Boeing also—and I simply forgot to mention this a minute ago—Boeing also made available four 720-B type airplanes which we leased on a short-term basis.

Excerpts from the Testimony of R. W. Rummel

Now, these airplanes had been manufactured—well, let's say they were being manufactured. They started life with the idea they would be delivered to Northwest Airlines.

However, Northwest had communicated a desire, [R-13,301] presumably to Boeing, that they didn't want the airplanes at that time.

One of the important considerations in this period was availability of equipment. We were—we believed that we were quite short of equipment, we believed that we needed to equip the airline as soon as we could do so, on a reasonably economical basis.

So equipment availability was certainly an important factor. Availability I think was the prime reason why the four Northwest airplanes were given serious consideration. However, there were other reasons that all bore on the final decision.

I realize I am being lengthy, Mr. Davis. This, by nature, was a complicated juggling of considerations, and we—many of which involved judgment, but we tried to come to what we thought was the best overall thing for TWA.

Boeing could make the Northwest airplanes available rather quickly. Additionally, we found that by making one small change in the engine, and we found that through negotiating with Pratt & Whitney, that Pratt could produce the same engine except for this one small change for installation in those airplanes that we later would have received on the 131-Bs and 331-Bs, so that the spare engines that we procured for the—at that point would have pro- [R-13,302] cured for the 131-B and 331-B fleet would be the same as for these four airplanes.

In other words, what we did was spare for twenty airplanes rather than twenty-four. This took some doing at Pratt & Whitney with respect to accelerating its production to make these engines available.

Excerpts from the Testimony of R. W. Rummel

I might say, to clarify it, possibly, that the small change was simply a change in a schedule in the fuel control.

Q. I don't want to divert your train of thought, Mr. Rummel, any more than necessary, but in giving the explanation that you did with respect to desirability of adding more of the same to an existing fleet you compared or you referred to the 331-Bs, and in that connection you mentioned the Convair equipment, but you never compared, to my understanding, the 131-B, performance-wise, utilization-wise, versus the 990, or the 727, as to range, speed, for domestic use.,

I remember your testimony relating to the advantages in the international route of having something comparative with Pan Am. But you haven't really finished that.

Would you mind, before we go any further, clarifying that further a little bit for me so I can understand [R-13,303] a little more what the comparable aspects of the 131 are to either an 880 or a 990? A. I just hadn't gotten to it, Mr. Davis. I will be glad to do it now.

Q. I am sorry. Proceed along the lines you were, then, if you are going to come to it. A. The performance of the 131-B was clearly, in our opinion, superior to the 990 in several respects. It had more range, although—

Q. How much more? A. I couldn't give you a number now without looking it up.

Q. Approximately. Give me an idea. A. Well, let me say that the 990 that we were looking at then, as I recall it, still hadn't encountered the deep trouble it found itself in with respect to performance later on, although we had forecast for the 990 that there would be a speed problem, and we included this in numbers of studies on the 990.

Q. When had you done that? A. Well, we looked at the 990, as I indicated previously, on and off through the

years. But I am talking now about the study which led to the decision to buy Boeings, the big study that I have been discussing.

[R-13,304] Q. I understand that, but you are confusing me when you say that you had made deep studies before and had opinions as to the probable performance of the 990. I was left with the impression that the 990 was so secretive that you had not been permitted to take any part in studying the 990 program.

Did something happen that you haven't told us about? A. I don't recall saying I made deep studies. I think I said the Convair we were looking at at the time that I was discussing a moment ago had not yet encountered deep performance troubles.

Q. Yes, and then you went and said that based upon your prior consideration of the 990 you had predicted that it would not meet certain speed requirements, or words to that effect, and I am trying to get you to identify when you did make a study or an evaluation of the 990. A. Well, as I indicated before, Mr. Davis, and I will try to clarify the point you are raising, we were not permitted to deal in any way, nor were we asked to, we were asked not to, in behalf of Hughes Tool or Hughes, on 990 acquisitions. I was asked to give instructions to Bew, and my other people, to not become involved in the 990, which I did upon receipt of such instructions.

[R-13,305] At one point, as I also indicated I think before, we made a five-year projection of what would happen to TWA if we obtained a fleet of 990s.

This was done for the Hughes Tool Company at the request, as I recall it, of Raymond Holliday, but I believe that Mr. Thomas called me and said he would make that request.

Excerpts from the Testimony of R. W. Rummel

I also I think indicated before there had been discussions from time to time with Mr. Hughes on some of the performance aspects of the 990.

Convair certainly sent material in on the 990, sample specs, that sort of thing, and these were available from which to at least have an idea what the airplane was about.

I know of nothing inconsistent with what I have said in this respect, although I realize I might not have been totally clear. I will try to clarify it if I haven't.

Q. Will you pursue, then, your comparison of the 990 you were considering in comparison to the 131? A. Well, I was getting at the speed comparison of the 131-B and the 990. As we knew it then, and as I recall it, we showed the 990 as being slightly less fast than Convair did, because we believed that would be the case.

Convair were not releasing at that time, possibly [R-13,306] because they didn't have it, I am not sure, but they were not releasing the result of flight test information showing what the speed actually was.

My recollection now is that when this study was undertaken, which, incidentally, was not July, it was before then, that they probably didn't really know.

It turned out, I might add somewhat parenthetically, that the airplane, when it was initially certificated, fell far, far short on speed, and produced a speed significantly less than we had assumed in that study.

Now, Convair have since modified, after an extremely exhaustive and searching research program, as I understand it—I understand this because I was told this, I wasn't part of it—

Q. Told by whom? A. Convair people, I believe. It was well publicized, I might say, it wasn't any secret.

However, as a result of the modification, the airplane regained some of its speed, and as I recall our last chat

to see whether our assumptions were valid or not, the final speed came out still somewhat less than we had assumed in this study, which indicated to us that our, say, mild appreciation of the Convair speed had been correct.

In fact, it had been somewhat non-conservative, [R-13,307] because the airplane didn't come up to the speed.

Well, the 131-B was shown to have a speed advantage, and a fairly significant one, looking at how the airplane would be flown, normal cruising altitudes that were available on the airways, and that sort of thing, relative to the 990.

Q. It will save time in the long run, Mr. Rummel, if I interrupt you from time to time, if I may, because these generalities are not being very helpful.

Will you first identify the range characteristics of the 131 to the 131-B and to the 990 and to the 880, so we get an idea of the difference involved, and then I would like you to do the same thing with respect to the speed, so that we can understand how much of a difference you are talking about, and on the 990 speed, let us take what you know as to the speed at which it is being operated by American Airlines, who has 990s, and I would like you to refer to operational speeds, or you can give me also, if you want to, ranges or technical speeds which the aircraft could achieve under certain conditions, if that is an important factor.

What I am trying to do, Mr. Rummel, is to try to understand the differences in these various types of aircraft which you were debating or considering, as to which [R-13,308] one ought to be procured.

Mr. Williams: There are several questions there. I don't mind your starting out with the first question.

Excerpts from the Testimony of R. W. Rummel

Q. Let's take the range first.

Mr. Williams: You have about four different types of planes.

Q. The 131 to the 131-B.

Mr. Williams: You want a comparison between the 131 and 131-B on range.

A. The significance of the range difference, and I simply do not recall a specific number, this depends on the altitude, the temperature, and many other variables that occur, but the significance of the range difference between the 131 and the 131-B is simply that the 181-B was quite capable of good, steady, reliable non-stop flights to the Paris and Rome gateways from New York.

The 131 we felt, while it could on occasion make this flight, and in fact did in Pan American's operation, was not a good, reliable operation in the sense of expectancy of flight completion without stopping for fuel or on time completion.

Q. Can you give me— A. So this meant that the 131-B, with its range, could be applied when needed to Atlantic operations. As a matter [R-13,309] fact, we arranged with Boeing, for five of those airplanes, to have provisions installed to permit the airplanes to be rather quickly placed in international service if we should want to do that later on, although the provisions or the installations of international equipment would not have been completed at time of delivery.

We simply carried to the point where this kind of a conversion would be simple to do. So even though the 131-Bs were initially slated for domestic use, and I might

say that the 131 and the 131-B, while there was a difference in range, they both had ample range for domestic non-stop service; the significance was in providing flexibility in a type which through the years would permit using the airplane both in domestic or international, maybe other theaters depending on what occurred.

Q. Can you give that range in terms of miles or range of miles? I understand the necessity of reliability, and that weather conditions and the like do affect jet aircraft, but I gather from your answer that the range of the 131 and 131-B was substantially the same except the B could be depended upon more surely to cover the same distance. A. I gave the wrong impression. There is a significant difference in range between the 131 and the 131-B, and the difference is that with the 131-B you can schedule [R-13,310] with reliability Atlantic winter crossings and Atlantic summer crossings, either one.

With the 131 you are fairly reliable in the summer, you are not reliable in the winter. I don't recall the exact difference in miles.

Q. What is the difference in speed between the 131 and the 131-B? A. Well, it was very great, particularly in the summertime. The 131 power plant is such as to be more sensitive to changes in ambient conditions, partly because the airplane, with that engine, is more marginally powered than is the 131-B.

The 131-B, as I recall it, has a somewhat broader altitude band of high speed operation than does the 131. I don't recall—in fact, I don't think—I think the only way to compare speeds is to take specific conditions and work them out, but on a very broad basis, the 131-B was faster than the 131 by far, and it was faster than the 990.

Maybe it would help if I deviated slightly from your categorical question to say that as a broad thing the 131

had a certain usable speed regime, the 880 was faster, the 990 was still faster, as we figured it, and the 131-B was a little faster than the 990.

[R-13,311] Q. I am trying to have an understanding of how critical this difference in speed is.

Let me put it this way to you: If those aircraft were placed in service between, say, New York and Los Angeles, would this difference in speed permit you to schedule the flight over a shorter period of time, and if so, to what extent, by the use of these various types of equipment that we have been discussing?

All of them fly or are capable of flying non-stop New York-Los Angeles, is that right? A. The 880 does not. Under some weather conditions it can. It is not scheduled non-stop, no.

Q. Let us take—you are in competition with American Airlines, who does use 990s? A. Yes.

Q. Now can you give me to what extent this difference in speed that you have been referring to permitted the airline to schedule the trip from New York to Los Angeles over a shorter period of time by reason of this use of a different aircraft? A. To my best knowledge, Mr. Davis, American does not fly 990s non-stop coast to coast, nor does anyone else.

Q. Shall we take a New York-Chicago segment, is that a fair segment to use, where these various aircraft could [R-13,312] be used? A. The shorter the segment the less noticeable the difference in speed in terms of schedule.

Q. I appreciate that, but I am trying to get something tangible, Mr. Rummel. You are testifying that one aircraft is faster than the other, and sometimes you say much faster. What I am trying to get you to do in any way which it is feasible to do is to identify what you

mean by much faster because what to you may be much faster to me may be an insignificant difference, or the reverse, and I am trying to get you to explain to us what you mean when you say that one aircraft is much faster than another. A. Let me say first that the significance of a faster speed, in our view, relates directly to the significance of that difference with the public.

In other words, if there is enough to influence the public to fly with one airline versus the other because that one airline has a higher speed than the other, then the degree to which that occurs, of course, is significant.

I think on a coast to coast flight the 131-B is on the order of possibly 45 minutes faster than the 131, but this depends upon the assumptions that go into the scheduling practice, how much of the added speed do you set aside to improve on time reliability, how much do you [R-13,313] put in the schedule to capture an advantage with respect to speed so as to impress the public, and so on, and these practices, unfortunately, do vary from time to time.

Q. I understand that between the 131 and the 131-B. Now I am trying to find the aircraft in the fleet of TWA that we can use to compare the 880 or the 990. What Boeing is comparable to the route segments on which the 880 is being used? A. Well, the 880 is being used New York-Kansas City, Kansas City-Los Angeles, I believe it is being used Chicago-Los Angeles.

Q: Is the 131 also used sometimes on those segments? A. Yes.

Q. Now will you give me the comparison, from a scheduling point of view, between the 131 and the 131-B if used on the same segment on which the 880 is used?

Mr. Williams: Do you understand that question?

Excerpts from the Testimony of R. W. Rummel

The Witness: I think I understand. He is asking how the flight schedules compare.

Q. That's right. I am trying to get you to describe in a meaningful manner this difference in speed that you have been referring to.

I would use New York to Los Angeles, but you tell me you don't use the 880 that way. I am trying to get [R-13,314] you to take any reasonable segment on which the 880 is used and on which you sometimes use the 131 or the 131-B when used domestically so I can understand how much of a difference it means or that you are talking about. A. Well, I mentioned three different segments. The shorter the segment the less the difference. Not just because it is shorter, but because the percentage of time taxing out and so on is a greater percentage, which reduces the average, and airways are differently situated.

Normally the shorter the trip the percentage of deviation or routing on to and off of the airway is greater than on long haul, and all these things make this difference in speed of less significance on the short haul.

The actual performance difference between the 880 and the 131 may or may not have been consistently reflected in the published schedules. This is one reason I appear to hesitate.

The actual difference would be on the order of, on, say, a New York-Chicago flight, as I recall it, possibly 7 to 9 or 11 minutes.

Q. In favor of the 880? A. Yes. I am not certain that I could find a chart, but this is just my recollection of the order at this time.

Q. The 990 if used over the same route segment? [R-13,315] A. Well, the 990, when it was initially deliv-

ered, as nearly as we could find out, did not have a speed advantage over the 880.

Q. Does it now have one? A. After it was modified, while we might acknowledge this to American Airlines, I think it did.

As I recall it, the difference in the 990 as American initially flew it—excuse me—the difference in the 990 in terms of actual performance, as nearly as we could keep tabs on them, in relation to the 880, was that there was very little difference, maybe a matter of a couple of minutes either way.

Q. Take a segment such as New York to Kansas City, which is a little bit longer than New York to Chicago, isn't it? A. Yes, sir.

Q. What would be the difference between the 131, the 880 and the 990, if flown on that segment? A. Well, I don't recall the numbers, but it would be greater than on the shorter segment, obviously.

Q. I am trying to get an idea. Instead of 8 to 10 minutes in favor of the 880, would it be as much as 20 minutes? A. It could be, yes.

[R-13,316] Q. In favor of the 880 over the 131? A. Yes.

Q. Chicago to Los Angeles, would that segment be substantially different? A. Yes, a little longer.

Q. Can you give me an idea what the difference would be if flown on that segment? A. Well, I am guessing. It would be on the order of the same thing or maybe a minute or so different from the New York to Kansas City segment.

Q. Approximately 20 minutes? A. Thereabouts, maybe less. Maybe New York to Kansas City would be on the order of 15 rather than 20. I just can't say, Mr. Davis.

I must say that these actual differences have to be viewed as some sort of guess as to the averages. To be specific, there are variables, and it is necessary to sit down and be quite specific.

Q. That is the practical application of the difference of speed in these type of aircraft, isn't it, the public understanding as to which gets you there faster? A. I don't know what the public understanding is or was with respect to the differences in types. I know that a major advertising campaign at one time was entered [R-13,317] into to promote the speed of the 880 [R-13,318] as the fastest thing in the skies, which I think it was at that time. But from time to time, as successive types came out, other airlines did the same thing, and what the public state of mind is or was, I would be the last one to try to guess. I don't know. I hope we made the impact.

Mr. Davis: Would this be a convenient time for the morning recess?

The Special Master: Yes. We will take a short recess.

(Whereupon, a short recess was taken)

By Mr. Davis:

Q. Mr. Rummel, will you describe who made the decision to add Boeings to the fleet rather than adding Convairs?

Mr. Williams: I have no objection to that question, but my recollection of the pending questions or question had to do also with a comparison with the 131-B.

The fact is that TWA was buying, in 1961, 131-Bs. You haven't covered that yet. I don't think you have.

Excerpts from the Testimony of R. W. Rummel

Mr. Davis: That may be right. He gave me a range.

Q. Will you take the 131-B over the same route segments that you previously have identified, namely, New [R-13,319] York-Chicago, New York-Kansas City, and I believe you said Chicago-Los Angeles was substantially the same as the New York-Kansas City segment, so let's take those two segments, and give me the relative advantage scheduling-wise or practical advantage of the 131-B, if used on those segments? A. Yes. Let me point out, if I may, that the relative advantages has to be measured more than simply one TWA airplane to the other TWA airplane.

It should be looked at and measured in relation to what the competition has to offer on similar segments, and at this time American Airlines had in the process of conversion 121-Bs.

In other words, they took the jets they initially had procured without fans and converted them to fans. When I say "they converted them," they arranged for the conversion of them at and by Boeing.

Q. What is a 121 as compared to a 131? Is that the same aircraft merely made for a different customer? A. Yes. I am not certain that 121 is the right number, but I—at least it's the same basic 707, one being tailor made, to the extent they were tailor made, for American, the other being tailor made, to the extent they were tailor made, for us, and they gave a different number for each of the series to each of their customers.

[R-13,320] Q. Maybe that is what is confusing me. Are you saying that if you were to compare or make the comparison of the 880 and 990 to a 121 that American was using in competition with you the result would be

different than by comparing it to a 131? A. No. What I was saying or going to say was simply that American were converting all of their airplanes to fan powered jets.

They also had ordered additional fan powered jets. These were in the process of being manufactured and were shortly to be delivered.

In other words, American had a plan, and it was under execution, to have an all fan fleet of jets. Now, keep in mind when I say "fan" I am drawing the distinction between the B series and the plain series that we had ordered from Boeing.

American and TWA are certainly highly competitive on the important coast to coast routes, and on other segments as well.

We felt we must try to at least match and, if possible, surpass American in every respect that we could in these markets.

The 131-B is, we think, a somewhat better airplane than American Airlines with respect to a number of [R-13,371] things. For example, it has somewhat more power than the American Airlines fan engines.

So this, then, I think is a far more significant factor with respect to speed than how—in terms of decision—than how the 131-B compared to TWA's 131s. We planned to put the 131-Bs initially in our major coast to coast markets, then, as we got more into the next major markets, say, the long haul one stops, and while this was going on we planned to remove from those markets the non-fan airplanes and put them in segments where they would be more apt to be competitive in terms of speed with other airplanes, because as I pointed out, as the length of haul reduces the relative advantage or disadvantage in terms of time becomes less and less as the length of haul becomes less and less.

Excerpts from the Testimony of R. W. Rummel

Q. I appreciate that, and that is why perhaps it would be a waste of time to try to compare the 131-B with the Convair equipment that you had and the Convair equipment that might be additionally available to you, since the 880 and the 990 is not used on the same route segments that the 131-B was intended for.

[R-13,322] Can you identify the Boeing aircraft which was usable or economically intended for use on segments comparable to the segments on which the 880 was being used or the 990 would have been used if 990s had been procured?

Do you follow me?

Would that be the 720 or the 727 Boeing?

A. The 720 and/or the 720-B were also given consideration by TWA. The 727-B and the 720 are competitive —it is a matter of degree here—on segments flown by the 880, on some segments flown by the 880.

Q. So will you identify the 720 and 720-B in comparison to the 880 or the 990? A. Well, the 720-B is the fan-powered development of the basic 720. The 720 is a slightly smaller airplane than the original 120 series. The 131 was one of the 120 series of 707s. It was developed for shorter range use than the 120 series, and consequently had a somewhat lighter structure and less allowable takeoff and landing weights than the bigger predecessor.

Q. And is therefore more comparable to the 880 as an aircraft? A. It is more comparable to the way the 880 turned out.

Initially we did envision the 880 as a coast-to- [R-13,323] coast non-stop airplane, back when Hughes originally placed the order. But I am speaking of how it turned out.

Excerpts from the Testimony of R. W. Rummel

I must say too, lest I unintentionally confuse the issue, we did look at the 990 to see what it could do in coast-to-coast service.

Q. When was that? A. That was during the time we were considering both the Boeings and the 990s.

Q. What year are you talking about now? A. In 1960-1961, the period that I understand we are talking about.

The 720-B, as I recall it, was offered with extra fuel tankage. In other words, additional tankage was a feature that was available on the Northwest airplanes that we leased, or rather the Boeing airplanes that we leased from Boeing built to the Northwest specifications had this tankage and were capable of coast-to-coast operations.

The difference between the 720-B and the 720 with respect to performance would be less than the difference between the 131 and the 131-B, but the speed performance of the 720-B and the 131-B, with the same power plant variant installed, would be very little.

[R-13,324] Q. Could you compare the 720 or 720-B to the 880 and the 990 over these segments we have identified, Chicago to New York and Chicago to Kansas City, so the picture that you are describing would stand out a little more clearly? A. Yes. What I just said means that the comparison I gave earlier is substantially correct. It is simply—what I am saying is that the 720-B, on the segments for which it is suited, is so much like the 131-B that the previous comparison holds.

It may be slightly faster, but very little.

Now, the 720 would be a little faster than the 131, but I don't believe it to be enough to be of high significance.

Q. I don't believe you have ever given me the scheduled advantage or scheduling advantage that the 131 or 131-B, and therefore the 720 or 720-B, would have over the 880

or the 990 on the New York-Chicago segment and the New York-Kansas City segment. A. Well, on New York-Chicago, it would be a matter of relatively few minutes if one compares the 720-B to the modified 990, but the 720-B would be faster, assuming flight practices and patterns to be the same.

Obviously there is a difference in clearances [R-13,325] and so on from day to day and flight to flight.

I don't view the differences there as probably having significance with respect to a published schedule.

It might have if the schedule, for example, reflected corporate policy rather than actual airplane performance.

Q. Now, will you describe who or how the decision was made to add Boeings to the fleet rather than add Convair equipment?

The Special Master: Mr. Davis, before you go into that, I would like to have a clarification of that statement about corporate policy as distinguished from other considerations in the last answer.

Mr. Davis: I didn't hear it. May I have that last answer read?

(The answer was read.)

The Witness: I will be glad to clarify that, Mr. Special Master.

What I was alluding to was the differences that may exist between airlines with respect to how the flight schedules are arrived at.

Numbers of factors are considered, including certain factors relating to probability of on-time completion of the flights. One airline may attach [R-13,326] great importance to having established or being able to establish or continue a record of having a certain percentage of their flights always on

time with the belief that perhaps this instills confidence in the regularity of the airplane.

Another airline may feel the same way, but might, for example, feel that that is all well and good, but it is more important to reduce the probability of completion on time and increase the published speed somewhat.

These are considerations, among others, which go into determining what a flight schedule would be, and to this extent it can reflect the policy views of the corporation as to relative importance of these factors.

These views may vary from time to time.

There are other factors, but this would be an example to illustrate what I was referring to.

The Special Master: Can you apply that to TWA and some of your principal competitors as you view it? How do you regard this being on time and—

The Witness: We view being on time, Mr. Special Master, as of extreme importance. We feel that this is important and significant with respect [R-13,327] to, over a period of time, creating the kind of public image that we want.

We want an image of regularity, reliability, and we want the customer to feel that when he gets on a TWA airplane the odds are such that he has every reason to expect it will leave on time and it will arrive on time.

I don't mean to imply that we schedule to a hundred per cent on-time completion, because we would not have competitive schedules published, if we did this. But we do try to emphasize regularity and on-timeness, and we think that we have

attained an excellent degree of on-timeness, I might add.

The fact is that comparative statistics for the industry that we have available indicate TWA has consistently done significantly better in this respect than many of our competitors with respect to our jets.

The Special Master: So you regard that some of your principal competitors do not give the same weight to this factor of being on time that you do as a corporate policy, is that what you are saying?

The Witness: Well, I don't actually— I mean, I couldn't testify as to how much relative weight [R-13,328] they put on it.

I think the result of our operations in comparison to theirs in this respect speaks for itself.

There has not, in a number of cases, been significant differences in flight schedules.

Now, once in a while flight schedules reflect the competitive urgency or need for having a slightly different schedule than one might otherwise have in order to make a claim with respect to speed or the fastest airplane.

As I recall it, at one time we published a schedule that was five minutes faster than our competitors to justify, if you like, an advertising campaign which was coordinated by the Hughes office.

Q. Now will you address yourself to my last question, which related to a description of—

Mr. Williams: How the decision was made to add Boeings to the fleet.

Excerpts from the Testimony of R. W. Rummel

Mr. Davis: Yes.

Q. Who and how.

Mr. Williams: Once before you asked why TWA made the decision to buy Boeings instead of Convairs. Now the question is how was the decision made and who made it?

[R-13,329] Q. Who and how was the decision made to add Boeings rather than Convairs is what I am trying to get you to describe. In other words, whatever recommendation you made, to whom it was made, what group of people, if it was done in a group meeting.

How was the decision arrived at? A. Well, first from the viewpoint of the planning and research function of TWA, I developed with my associates in the department and with—and through consultation with other departments in TWA the report that I referred to earlier as being a comprehensive review and look at all equipment possibilities that we could foresee that merited any consideration at all.

In arriving at what one might say was a decision to make a recommendation to top management, which came from planning and research, I met with and talked out at length with my associates and others in the company various factors.

We came to the conclusion jointly that we should recommend to top management that we move forward with the Boeing program. The people that aided in making that decision to recommend were primarily I think Mr. Rourke, Mr. Fellows. Once the decision to recommend was made, and the report issued for review and comment, pretty much [R-13,330] throughout the

top side of the organization, I believe a meeting was held with the Management Operating Committee, although I am not certain that is what it was called then.

At least, as I recall it, Mr. Pierson, Mr. Cocke and Mr. Leslie, myself, and it is quite possible that Mr. Duckworth or someone else was there, but I don't recall that specifically—

Q. Mr. Tillinghast was there? A. Oh, no. This was before Mr. Tillinghast was there.

Q. You mean before Mr. Tillinghast was president? A. Well, I think so. I think so. It was before he was there, anyway.

During this meeting recommendations were reviewed. There might have, in fact, been more than one meeting.

Mr. Leslie asked for several extra copies of the equipment report.

As I recall it, after Mr. Tillinghast's election, but before he was active, one such report was sent to him, but I don't recall whether I sent it or someone else did. I did meet with Mr. Tillinghast and Mr. Fellows one day during which we touched on the recommendations contained in the report, but we didn't have what I would call a lengthy discourse at that time. That was before he moved over to 380 Madison Avenue, and was the first time I had met him.

[R-13,331] After he moved over there were a number of review meetings.

I remember that he made it a point to review the recommendations at a number of, as I recall it, management policy committee meetings, asking for views as to whether or not members of management agreed with the recommendation or they didn't agree with it or what other views they might have. There was general agreement.

Excerpts from the Testimony of R. W. Rummel

I assume I don't need to name the members of the management policy committee.

Q. They have been identified. A. During this period I continued to negotiate with Boeing to perfect the deal or gain our objectives, our negotiating objectives, and I would occasionally let Mr. Tillinghast and others, as appropriate, including Mr. Leslie, know where that stood, and there were some discussions on that.

We had discussions on both the Boeing and the Convairs.

I recall I think one—well, I am getting a little bit ahead of myself.

While this was going on I also was perfecting the cash requirements in terms of the more precise needs as to when and the amounts. We had a time problem with Boeing [R-13,332] because Boeing had advised of a price rise to all of its customers, and this called for some urgency of handling.

As I recall it, I appeared before TWA's board of directors once Mr. Tillinghast seemed satisfied as to management's view that this was the right way to go—this was a Kansas City meeting, I think; I don't recall the month—and presented the Boeing program and alternate programs. We discussed Convairs, what it looked like, one compared to the other.

So I would, in sum, review the decision-making progress on the Boeing program as being one that involved every significant level of management once the recommendation came from planning and research which finally, when concurred in, went to the board for its consideration.

The final decision would have been by the board.

I think there may have been an executive committee interspersed in this process that I attended.

Excerpts from the Testimony of R. W. Rummel

Q. Did you have any discussions, directly or indirectly, with Mr. Hughes with respect to this decision or recommendation which you made? A. No, nothing on the specific Boeing program.

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[Testimony—September 21, 1962]

[R-13,532] • • •

I might say, the model 18 was not the model 880. It was a larger predecessor generally similar to what Boeing finally built, but at that time believed to be somewhat better than either Boeing or Douglas' offering, and to explain that I perhaps should say that my recollection is that at that time Boeing and Douglas were both offering domestic jets, and had not taken the step to international jets, where we were seeking, Hughes and I, to get an airplane that could serve both areas. I think I viewed all these efforts as representing TWA's best interest, and I certainly wasn't aware of any conflicts of interest.

The model 18 development spanned quite a period of time, during which specifications and contracts were developed. I reported to Hughes from time to time. I was cautioned not to discuss this with TWA management on numbers of occasions.

Mr. Hughes, however, knew and understood that I was bringing in TWA experts from time to time to aid and assist in specific areas.

Now, I am not saying that each and every person was cleared. I think he had that confidence in me.

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Excerpts from the Testimony of R. W. Rummel

[Testimony—October 1, 1962]

[R-13,577] * * *

I am not clear now whether there was something else that you wanted to clarify before resuming with your answer of the other day. A. There seemed possibly some confusion in the record. I don't know exactly where this would best fit, but I did not mention, as I recall it, that Hughes had told me at the time Burgess became president that he would continue to handle the airplane procurement end of it, that Burgess was the operating head of the company, and that it was understood that I would continue to work with Hughes on equipment, or words to that effect. I might say that this was pretty much how it had been working up to that time.

I don't recall if this was given to me in response to a question I asked Hughes or not, but I did always want to know just what was expected of me.

Along that same line, when Mr. Thomas was elected president Mr. Hughes advised that Mr. Thomas was the operating head of the company and that he, that is, Hughes, and I would continue to handle equipment.

You recall this is long after the jets had been ordered, and we were quite a ways down the jet road.

When I first met Mr. Thomas some weeks later in [R-13,578] New York he said exactly the same thing. I didn't raise the question. He brought it up himself, and said that he understood that Hughes and I would handle equipment and he would handle the operating end of the company.

I recall that I said that I didn't really see how it could quite work that way. In any event, I thought he should be reasonably well apprised of equipment, because I felt sure that before any major program was undertaken that

Mr. Hughes would be in touch with him. But these were the general directives which existed as far as I knew on direct advice from both Hughes and Thomas at the time Thomas became president.

Now, this—I come out with this because it seems to me this may clarify to some extent the part that I played back and forth in this overall handling of equipment.

Q. I am interested, however, if you could give us a little more fully your recollection as to the first time that Mr. Hughes told you the part that you would play or that he would play in this connection.

You have referred to some conversation you had with Mr. Hughes at or about the time that Mr. Burgess became president. Was that the first time that you recall that there was any effort made on Mr. Hughes' part to describe to you what this job of yours was going to be or

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[R-13,637] I already testified, I believe, being advised by Leonard Schwartz and Raymond Cook concerning reduction from thirty to twenty Convairs and from eighteen to twelve Boeings; that is, 331, and I recall recommending to Mr. Cook that TWA obtain at least the first twelve of the eighteen if there had to be a reduction.

It was my feeling TWA should get all eighteen, but if reduction had to be made, or if that is what Hughes was finally going to offer, then I recommended that we get the first twelve, and that we not intersperse deliveries on some sort of an equally proportional basis with Pan American.

I wasn't a party to the negotiation with Pan American, other than just about to the extent I have stated. I knew it was going on, and I certainly can appreciate that in a

negotiation what you may want to accomplish may not be possible.

But it did come out on an equally proportional or pari passu basis. It was at this time that the work order for 60 engines was reduced to 40, and I think it was prior to this time that Jerry Owens, I believe Raymond Cook, undertook a negotiation—my part in this was trying to provide as much background as I could to aid and assist them in this negotiation • • •

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[Testimony—October 5, 1962]

[R-13,993] • • • I believe I testified that the meeting did not resolve those differences, but I believe clarified the issues for Mr. Hughes.

Q. I believe you testified about meetings where representatives of competing aircraft manufacturers were confronted, each signing a piece of paper as to their relative claims. I don't recall your having testified in any detail with respect to the meeting you are now referring to. A. Well, I don't recall testifying in great detail. I recall having mentioned this.

Q. I didn't mean to interrupt you. I am interested in how that meeting came about, and— A. It was called by Mr. Hughes.

Q. This was on the subject of the performance characteristics of the 1449A? A. That's my recollection, yes.

Q. Please proceed. A. Before all this got under way, that is, before the negotiation became advanced, we had analyzed the DC-7C and other airplanes that were being considered, I believe including turboprop possibilities of the Constellation, and had recommended that TWA procure the [R-13,994] DC-7C. The DC-7C was a DC-7 with more wing and more fuel capacity. It may have had a

fuselage one seat row longer than the DC-7, but I don't recall that at the moment. This recommendation had been concurred in by Mr. Damon and Mr. Collings, and I am quite sure had been passed along to Mr. Hughes.

It may have been this recommendation that sparked the negotiation at Lockheed, but I don't recall specifically that that in fact was the case.

But in any event, the Lockheed negotiation started about this time, or shortly thereafter, for the 1449A.

I recall on numbers of occasions advising Mr. Hughes that the 1449A, in my opinion, was uneconomical, and that it was a poor risk, that I didn't feel we had reasonable technical assurance that either the engine or the airplane, but my main worry was the engine, could be reasonably expected to produce the fuel consumption characteristics that Pratt & Whitney was claiming for it and that Lockheed was relying on.

At one point we looked at wing tip engines on the 1449A and found that with normal operating practices, as I recall it now, the airplane could only fly non-stop about halfway across the continent. That was with the tip engines on.

[R-13,995] I simply point that out to avoid confusion. We also, as I recall it now, looked at operating these tip engines part way across to get a speed boost and cutting them off and letting them fly along for the ride. We looked at all sorts of possibilities.

Mr. Hughes seemed determined to move forward with the 1449A. At one point I recall risking his anger by raising the question as to whether or not he wanted a vehicle with which TWA could make money. I realized there could be other considerations.

He indicated that he certainly did want airplanes that TWA could make money with, and that he recognized

there was a difference of opinion between TWA and Lockheed on the merits of the airplane. I tried to dissuade him from moving forward with the 1449 because I did not believe it to be a worthwhile venture for TWA, and certainly not in comparison with the DC-7C.

[R-13,996] There was an additional meeting, as I recall, at Lockheed attended by Mr. Damon, I think Mr. Collings, myself and Mr. Rourke. As I recall it, Bob Gross, Kelly Johnson, possibly Courtlandt Cross, Leonard Schwartz, and I think a few others, were therefor Lockheed.

This was arranged before by Mr. Hughes in order for Lockheed to convince TWA that the airplane was a good airplane and one that they should be fully interested in, and possibly additionally to resolve some of the technical positions that we were apart on, but I don't remember that particular asspect being front and center at that time.

The 1649—I am sorry—the 1449A contract was signed by Hughes Tool—well, let me say, I didn't see anybody sign it, but it was wrapped up for signing. I guess I am not sure whether it was signed in California or Houston, but at least the signatures authorized on December 23, 1954, I think. I think it was December 23, 1954.

The meeting on December 23rd took place in the evening at the Beverly Hills Hotel. I recall that Raymond Cook, Mickey West, myself, I believe Harry L. West, were present, and I believe—well, I am certain the principal Lockheed representative was Leonard Schwartz, and I am sure there were a few others there.

[R-13,997] I believe one was Kirk Yost, but I am not absolutely positive. We were in a largish green colored room downstairs.

It was some sort of a dining room. I forget what it was called.

Excerpts from the Testimony of R. W. Rummel

Lockheed had the long paneled room on the other side of the building downstairs, and Schwartz was running from that meeting back and forth, conferring on various points with his people and then reporting them to Mr. Cook, who had the lead, as I observed it, in closing the deal.

I continued to try to prevail with respect to my views on the worthwhile nature of the airplane throughout the negotiation, and continued to do so that evening. As I recall it at just about every opportunity and every free moment I tried to convince Mr. Cook to some extent Mickey West— I say "some extent" because he was fairly new; I think that's the only time I saw him in relation to this particular deal—and I recall that at one point toward the end of the evening Mr. Cook was talking to Mr. Hughes, presumably either about the deal or the effect of the deal on the Hughes Tool cash position, or other considerations with which I was not directly involved or concerned, but Ray, knowing my long-standing feeling, [R-13,998] urged Mr. Hughes talk to me, he had asked that I stand by, and after this was said several times through the course of the conversation, at the close of the conversation Mr. Hughes did talk to me, and I remember advising that I felt it was a poor bet—I don't recall my exact words—that it was an airplane which I felt was exceedingly risky and one which, from all that I could see, even at that stage, would simply be an uneconomical undertaking.

As I recall it, Mr. Hughes indicated that he felt that Lockheed would do a pretty good job, that he felt that Lockheed would do a better job than the papers indicated, and something to the effect that if they did not they would certainly lose a long-standing customer, or something to this effect.

Excerpts from the Testimony of R. W. Rummel

I think he mentioned that he had an agreement with Lockheed—I don't recall what it was—either on the weight of the airplane, or some such thing, that he felt would improve the outlook.

I assume this was verbal. At least, I never saw it later, and it didn't come up again.

I did my best at that time to make it clear, at least as far as I was concerned, as a professional opinion, if you like, to Mr. Hughes that this was not the way to go, either for TWA or himself. However, the papers were [R-13,999] signed.

A good many other things went on during the period of the negotiation, and there were numbers of conversations with Mr. Hughes. I remember at one time being instrumental in having a couple of our pilots fly in one of the Navy airplanes equipped with these engines and to discuss with the Navy pilots who had flown it what their reactions were to the airplane.

When I say "the airplane," it was not the 1449, it was a standard size Connie with a standard wing with the same kind of engines mounted that I referred to earlier. Their reaction was exceedingly negative because of the—primarily, as I recall it, the vibration characteristics.

Several months after the deal had been closed—I am not sure of this now, but I think it was about several months or thereabouts—I received a call from Kelly Johnson advising that while he hated to have to tell me this, Pratt & Whitney had withdrawn the engine from production because recent tests they had run indicated that it was hopelessly out of line with respect to fuel consumption and that they saw no way to improve the engine because of basic problems they had discovered, and that even half way improvements couldn't be made in time for the airplane program

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